A STUDY TO ASSESS THE EFFECTIVENESS OF EDUCATIONAL INTERVENTION ON KNOWLEDGE REGARDING CARING SKILLS AND COPING ABILITIES OF MOTHERS WITH PREMATURE BABIES AT KMCH, COIMBATORE.

Reg. No: 301220460

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2014

CERTIFICATE

This is to certify that the Dissertation entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF EDUCATIONAL INTERVENTION ON KNOWLEDGE REGARDING CARING SKILLS AND COPING ABILITIES OF MOTHERS WITH PREMATURE BABIES AT KMCH, COIMBATORE"** is submitted to the faculty of Nursing, **The Tamilnadu DR .M.G.R. Medical University, Chennai** by **SHIBI ANGELA. M** in partial fulfillment of requirement for the degree of Master of Science in Nursing. It is the bonafide work done by her and the conclusions are her own. It is further certified that this dissertation or any part thereof has not formed the basis for award of any degree, diploma or similar titles.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LISTS OF ABBREVIATIONS

S.No	ABBREVIATIONS
1	LBW - Low Birth Weight
2	VLBW - Very Low Birth Weight
3	MLBW - Moderately Low Birth Weight
4	ELBW - Extremely Low Birth Weight
5	EBM - Expressed Breast Milk
6	KMC - Kangaroo Mother Care

CHAPTER-I

INTRODUCTION

"The journey ahead will strengthen our love

Our baby needs us to hold on to hope

As I continue to touch my tinny babies hand

I will forever be by their side"

JULIA TOIVONEN

Premature infants are otherwise called as preemies. The premature babies come to the world earlier than the full term infants. Babies born 37 to 42 weeks of gestation we called as a full term. Premature babies are a vulnerable group of babies, because they are physiologically unstable and neurologically immature. They cannot adopt the environmental situation and stress, which may adversely affect their growth and neuromotor development. Growth is an essential feature in the life cycle of every child but it is delayed in premature babies. **(Nightingale Nursing Times, 2012)**

Premature infants are at risk because their organ systems are immature and they lack adequate physiologic reserves to function in an extra uterine environment. The range of birth weight and the physiologic problems are varying widely among preterm infants as a result of increased survivability among those who weigh less than 1000g. However, the lower the weight and the gestational age are, the lower chances are of survival among infants born preterm. Two third of the infant death occur because of preterm birth. The incidence of preterm birth is highest among low socio economic groups which is likely a result of the lack of comprehensive health care. Some of the other causes that included in the preterm birth are gestational hypertension, maternal infection, multiple pregnancies, preterm premature rupture of membrane etc**...(Lowdermilk &Perry, 2010)**

The potential problems and care needs of the premature infant weighing 2000g differ from those of the term, post term or post mature infants of equal weight if these infants have

physiologic disorders and anomalies as well; these affect the infant's response to the treatment. Generally the closer infants who are to term from the standpoint of both gestational age and birth weight the easier their adjustment to the external environment. The cost of the care required by the premature infants is estimated to be in the billions of dollars each year and is increasing as the use of technology increases. **(Lowdermilk & perry, 2007)**

Today's children are tomorrow's citizen and leaders. Kangaroo mother care is the one of the important caring skill of the premature babies. In developing countries like India, use of incubators is the one of the management of premature babies exerts a heavy financial burden on parents of premature babies. Incubators are not affordable by the family members of premature babies because of high cost. Kangaroo mother care (KMC) is the one of the effective and low cost method to provide the care to the premature babies. So mothers of premature babies should be aware about kangaroo mother care. Kangaroo mother care not only prevents hypothermia in the premature babies but also improves bonding between baby and mother. Nurses play a prime role in educating mothers of premature babies regarding kangaroo mother care as they are the ones who interact more with parents than any other health team member. **(Nightingale Nursing Journal 2013)**

Lawn et al., (2004) conducted a study on Kangaroo mother care to prevent neonatal deaths due to preterm birth complications. Researcher conducted a study in systematic reviews. Fifteen were reported mortality and/or morbidity outcomes including six observational studies and nine randomized controlled trials (RCTs). The samples selected from middle income or lower income. All samples were hospital-based expect one, and included some babies less than birth-weight of 2000 g (assumed as preterm). One of the community-based trials had missing the birth weight data, and the other limitations were excluded. Two authors were explained the neonatal specific data. They conducted a study on meta-analysis in that three Randomized control trials showing kangaroo mother care in the first week of life shows a significant reduction in neonatal mortality (95% confidence interval (CI) 0.29–0.82, relative risk (RR) 0.49,) compared with standard care. Another one meta-analysis of three observational studies also suggested there is a significant mortality benefit (95% CI 0.58–0.7, RR 0.68). And the Five Randomized control trials suggested significant reductions in serious morbidity for babies less than 2000 g (CI 0.17–0.65, RR 0.34, 95%).

The birth of a baby is a wonderful complex process. Most of the babies admitted in the NICU have requires special care. The preterm babies need special care. Preterm babies are having lack the body fat. The body fat is necessary to maintain the body temperature, even they are wrapped with blankets they should not adapt the life outside the uterus. So in NICU radiant warmers or incubators are used to keep the babies warm. The incubators are made of transparent plastic, which completely surround an infant to keep the baby warm it decrease the chance of getting infection, and limit water loss from the baby. The radiant warmers are electrically warmed beds which open to the air. So the staff members should provide frequent care to the premature babies. The new trend in care of hypothermia is Kangaroo Mother Care. It is one of the cost effective method to prevent hypothermia. **(Nightingale Nursing Journal 2012)**

Premature babies have special nutritional needs because they grow as faster than the full term babies. Breast milk is one of the important sources of nutrition, but the premature babies are too immature and their digestive systems also immature and also they can't feed directly from the breast or bottle until they reached 32 -34 weeks gestational age. Therefore they have to be fed on naso gastric feeding. Some preterm babies also receive additional vitamin supplements such as phosphate, potassium minerals, potassium, magnesium and calcium are monitored regularly and the feeding of the premature baby is adjusted to keep these substances within a normal range. **(O.P Ghai, 2004)**

The concept of participation of the mother in the care of LBW baby needs special care under close supervision of the training. Inadequate knowledge of the mother regarding the care and conditions of work leads to high mortality among low birth weight babies. Because these babies need more care.

NEED FOR THE STUDY

In the year 2000 the World Health Organization had set the targets of Health for all. In particular, improvements were sought in maternity care provision and a reduction in perinatal mortality rates. The incidence of preterm birth has not reduced but it leads to improved neonatal management, increasing number of small babies who are surviving.

According to a report published recently, India has a highest number of deaths due to premature births, and ranks 36th in the list of preterm births globally. In 2010, out of 27 million

babies about 3.6 million were born premature, in that 303,600 do not survive due to complications. **(The Hindu May2, 2012)**

WHO estimates that, globally about 25 million low birth weight babies are born each year, consisting of 17% of all live births, nearly 95% of them in developing countries. The babies who born with less than 2500g of birth weight varies widely between regions of the world, with levels of 32% in southern Asia, 9% in Eastern Asia, 11% to 16% in Africa and 10% to 12% in Latin America. In India is 30% are low birth weight babies. Infants whose weigh less than 2.5 kg at birth represent about 26% of all live births in India. About 28%of babies born in India are low birth weight as compared to 4% in developed countries **(Nightingale Nursing Journal, 2013)**

Baby born as preterm is at greater risk for serious health problems for many reasons. If a baby born earlier the weight will be lesser and organs also will be less developed, and more complications it face. Such babies need special care in a neonatal intensive care unit, which has specialized medical staff and well working equipment that can deal with multiple problems faced by preterm infants. Very preterm babies also have the more risk of death and getting disabilities, such as vision and hearing loss, cerebral palsy, lung problems and gastrointestinal problems, mental retardation,etc… Preterm babies always look small and sick, and look different from full term babies. So the preterm babies have special needs, it was make their care different from that of full term infants and they often begin their lives after delivery in a NICU. which is designed to provide an atmosphere that limit stress to the infants and meet its basic needs such as nutrition warmth, protection and development.

Gertrud Svala Berkowttz et all... (1980) conducted a study on an epidemiologic study of preterm delivery. Case-control study was adopted in this study. This study was conducted at Yale-New Haven Hospital in Connecticut in the year of 1977. The population of the study was included 175 mothers of singleton preterm infants and 313 mothers of singleton term infants were selected in this study. The Significant level of risk factors of a preterm delivery included low socioeconomic status, less pre-gravid weight, inadequate weight gain during the pregnancy, previous preterm delivery, history of infertility problems, induced abortion termination of the previous pregnancy, vaginal spotting or bleeding during the pregnancy, of leisure-time physical activities during the pregnancy, ante partum hemorrhage, abnormal placental implantation,

alcohol consumption prior to the third trimester of pregnancy, and negative attitudinal expression toward the pregnancy **(International Journal of Epidemiology)**

Worldwide out of 130 million live births, about 33 million infants have less than 2500g. In India 7 million premature babies are born every year. Over 80% of all neonatal deaths in both developed and developing countries occur among the LBW babies. **(Nightingale Nursing Times, 2011)**

Babies born before 37 completed weeks of gestational age is called preterm or premature. Because of serious health hazards all babies born preterm are at risk, but those who born earlier they have more chance to getting a greater risk of long term disabilities, death and medical complications. Today so many advanced technologies develop. In obstetrics and neonatologist have more improved the chances of survival for the premature babies even the smallest babies also.

The mother is the most responsible person to care for premature baby. Mother's have less knowledge about the management of premature babies. During this time the mothers dependent on others. So the educational intervention is very much important for independent care. While the mothers have not given proper care to the premature babies, especially maintaining warmth and have not followed prevention of infection techniques. Hence, I have developed the educational intervention on caring skills of premature babies and to improve the knowledge to the mothers regarding caring skills of mothers with premature babies. **(Nightingale Nursing Times, 2011)**

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of educational intervention on Knowledge regarding caring skills and coping abilities of mothers with premature babies in KMCH, Coimbatore.

OBJECTIVES OF THE STUDY

- Assess the caring skills and coping abilities of mothers with premature babies
- Determine the effect of educational intervention on caring skills and coping abilities of mothers with premature babies
- Compare the pretest and post test score of caring skills of mothers with premature babies
- Associate the caring skills and coping ability of mothers with selected demographic variable

OPERATIONAL DEFINITION

EDUCATIONAL INTERVENTION

It is computer assisted education developed and provided by the investigator.

CARING SKILLS

Mothers who are having the skills to promote and support the baby

COPING ABILITIES

In this study coping ability refers to a behavioral effort and cognitive effort which is problem focused as well as emotion focused used by parents to manage the excessive demand of caring skills and coping abilities of their premature babies being admitted to NICU as measured through coping health inventory scale.

MOTHERS WITH PREMATURE BABIES

Mothers who are delivering the babies less than 37 weeks of gestation.

HYPOTHESES

H1: There is a significant difference in the caring skills and coping abilities among mothers with premature babies

ASSUMPTIONS

- Mothers with premature babies lack skill.
- Coping abilities vary between individuals and situation.

CONCEPTUAL FRAMEWORK

A concept is an idea. Conceptual framework is a group of concepts or ideas that are related to each other but the relationship is not explicit. Conceptual framework deals with abstractions that are assembled by virtue of their relevance to a common theme. (Polit and Hungler 1999)

The conceptual framework for this study was developed by applying Ludwigvon Bertalanffy (1968) general system theory. According to the general system (i.e.) closed and open. A closed system does not exchange every matter or information with its environment. In an open system energy, matter or information move into and out of system. All living system consists of the input, throughput and output process. According to theorist view, the information matter and energy that the system reviews, transforms the input in a process called as throughput and releases information, matter and energy, as output in the environment

In this present study the investigator considered the mother with premature babies as open system which possesses input throughput and output process.

Input

Input is the assessment of caring skills and coping abilities of mother's with premature babies prior to educational intervention.

Throughput

Regards with throughput the investigator gave computer assisted educational intervention to the mothers with premature babies regarding caring skills of premature babies such as respiratory and cardiac support, prevention of hypothermia, feeding of premature babies, kangaroo mother care and prevention of infection.

Output

Considering the output the investigator assess the caring skills and coping abilities of mothers after a week of educational intervention

By creating such awareness through education it will help the mothers with premature babies to follow the caring skills and coping abilities there by prevent occurrence of complications and help to leads healthy life.

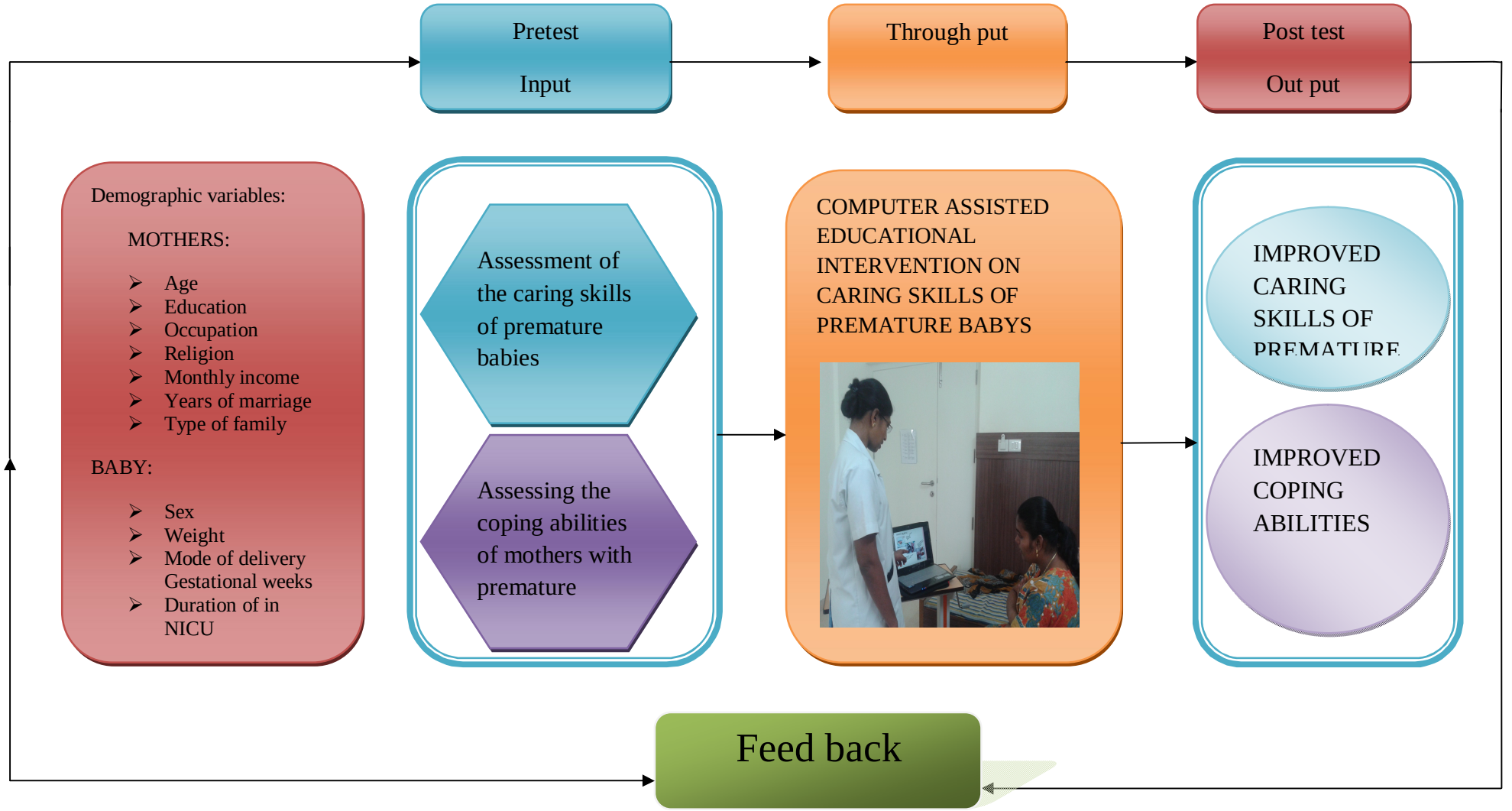

Figure 1: Ludwigvon Bertalanffy (1968) general system theory

CHAPTER- II

REVIEW OF LITERATURE

This chapter deals with review of literature related to caring skills and coping abilities of mothers with premature babies. The literature review can serve a number of important factors in the research process.

A literature review helps to lay the foundations for a study and can inspire new research ideas. A literature review also play role at the end of the study, when the researchers are typing to make sense of the findings. Most research reports include summaries of relevant literature in the introduction. A literature review provides with knowledge in the topic and illuminates the significance of the new study.

Review of literatures in the present study is classified into four sections:

Section A: Literatures related to Incidence of premature babies

Section B: Literature related to caring skills of premature babies

Section C: Literature related to coping abilities of premature babies

Section D: Literature related to effectiveness of teaching on caring skills of premature babies.

Section A: Literature related to Incidence of premature babies:

Beck et al., (2010) conducted a study on the worldwide incidence of preterm birth. Researcher were conducted a systematic review of published and unpublished data on maternal mortality. The result of the study was concluded that, in the year of 2005, worldwide 12.9 million births, or 9.6% of babies were preterm. In Africa and Asia approximately 11 million (85%) babies are in preterm, Europe and North America about 0.5 million babies undergone premature birth and 0.9 million premature babies in Latin America and the Caribbean. Africa and North America is the highest rates of preterm birth (11.9% and 10.6% of all births) and the lowest were in Europe (6.2%).

Sharon L et all., (1995) conducted a study on association between bacterial vaginosis and Preterm Delivery of a Low-Birth-Weight Infant. A cohort study was conducted by the

author. The researcher enumerated 10,397 pregnant women from seven medical centers and they had no obvious risk factors for preterm delivery. About 10,397 women 16 percent of the women's were detected bacterial vaginosis. Most of the women's who are having bacterial vaginosis are unmarried, they are in black, and they have low incomes, and the womens had previously delivered low-birth-weight infants. Multivariate analysis was enrolled in this study and the presence of bacterial vaginosis was associated with preterm delivery of a low-birth-weight infant. Low birth weight deliveries were also significant risk factors. (odds ratio 6.2 and 95 percent confidence interval, 4.6 to 8.4), and the loss of an earlier pregnancy

Siassi **et al., (1976)** conducted a study regarding incidence and Clinical Features of Patent Ductus Arteriosus in Low-Birth weight Infants. In this study included that the incidence of persistent patency of the ducts arteriosus beyond the 3rd day of life. The researcher selected 100 preterm infants with birth weight of 2,000 gm or less, and 50 infants with birth weights of 2,001 to 2,500 gm prospectively. The overall incidence of the study was 21%. The study was inversely related to increasing the birth weight and gestational age. The result of the study was that the immaturity of the low birth weight babies is the major determinant of the persistent patency of the ductus arteriosus. In this study there was a high degree of association between the presence of PDA and RDS. Eight infants with severe RDS and PDA developed heart failure and four required surgical ligation of the ductus. None of the infants with birth weights more than 2,000 gm who had PDA developed heart failure or required surgical ligation of the ductus arteriosus.

Section B: Literature related to literature to caring skills of premature babies

Pandiammal., (2011) conducted a study regarding the mother's knowledge of home management of low birth weight babies. Fifty mothers were selected in this study. Non probability purposive sampling technique was used. The result of the study was the pretest mean knowledge score were 49.13% with the enhancement of 93.66% in the posttest. The inferential statistics (paired't' test) was used to calculate the study. The significant difference between pretest and posttest knowledge score shows that there is a significant difference between all areas of mothers knowledge on home management of low birth weight baby ($p<0.01$ significant). Then the researcher associate the demographic variable that the educational status was found to be significantly associated $t=2.69$, $df=49$ with posttest knowledge at $p<0.01$.The study results

shows that that the structured teaching programme on home management of low birth weight baby was effective in enhancing knowledge among mothers with low birth weight babies that helps them to improve the mothers knowledge regarding home management of low birth weight and prevent infection while taking care of the baby.

Khashu **et al., (2009).** Conducted a study on perinatal Outcomes Associated with preterm birth at 33 to 36 Weeks' Gestation. Cohort study was used by the researcher and this data was used from the British Columbia Perinatal Database. This study was included perinatal Neonatal, Stillbirth rate, and infant mortality rates were highly significant in the preterm group. Preterm babies in this group were needed resuscitation at the time of birth more frequently than those in the term group. And the late-preterm babies had highly significant in the incidence of respiratory morbidity and infection had a significantly long duration of hospital stay. The maternal factors that were more common in the late-preterm group included teenage pregnancy, prelabor rupture of membranes, diabetes, primigravida, chorioamnionitis, hypertension, and thrombophilia.

Christy joy., (2008) conducted a study on effectiveness of structured teaching programme on home management of low birth weight babies. Researcher used 30 samples for her study. She concluded that the improvement of mean score is 30.32 ($t=18.4$) at $p<0.01$ level. She did a structured teaching programme and finally she concluded that the structured teaching programme was effective while improving the knowledge of mothers in home care management of low birth weight babies. The statistical analysis ANOVA was used in this study. The result of the study, ANOVA shows that highly significant association of post test knowledge with education level of $p=0.001$

Neu et al., (2008) conducted a study on early weeks after premature birth as experienced by Latina adolescent mothers, by naturalistic inquiry. The study included 12 adolescent mothers. Researcher enrolled with an interventional study subsequent to the preterm birth of their first baby. The results of this study are themes that developed from a discussion of the mothers were a) devotion to the baby b) responsibilities c) relationships. The adolescent mothers revealed devotion to their babies in their positive comments and gentle touch about their baby and there , interest of the intervention program that developed holding and provided information about infant development and their advocacy with medical professionals and family members for their baby's wellbeing. Sharing the responsibilities to benefit the family members was evident within

their families. The Family relationships were involved supportive and vital to the adolescent mothers.

Kassie.A et al., (2005) conducted one year of study for the effectiveness of early kangaroo mother care before stabilizations of low birth weight infants. Researcher included 62 infants were undergone as kangaroo mother care and the remaining 61 babies were conventional method of care. The result of the study showed that 14/62 (22.5%) of KMC Vs 24/64 (38%) KMC babies during the study (p=0.05) survival for the preterm low birth weight infants was better for the early KMC group in the first 12 hours of life and the reafter.

Swartz K et al., (2005) conducted a study on parenting preterm infants. The researcher involved an ethnographic approach and this was used to analyze the findings. The 10 qualitative research studies were concluded that the parenting of the preterm infants upon hospital discharge and on into the toddler years. The result of these study shows those five themes of parenting preterm infants emerged, protecting fragility, compensating for the past, cautiously affirming the future, adapting to risk, and preserving the family.

Husslein et al., (2004) conducted a study on Prospective randomized controlled trial of an infection screening programme to reduce the rate of preterm delivery. Prospective, randomized controlled trail design was used in this study. The finding of the study was the outcome data were available for 2058 women in the intervention group and 2097 women in the control group. In this intervention group, the number of preterm births was significantly lower than in the control group, the number of preterm births was significantly lower than in the control group (3.0% v5.3%, 95% the confidence interval 1.2 to 3.6; p=0.0001). The preterm births were also significantly reduced in lower weight categories at less than 37 weeks and ≤ 2500g weight late miscarriages also occurred in the intervention group in that 15 mothers in a control group.

Preyde **et al., (2003)** Effectiveness of a parent "buddy" program for mothers of very preterm infants in a neonatal intensive care unit. Researcher conducted a cohort study, of 32 mothers were selected for the intervention group from the Mount Sinai Hospital and 28 mothers were selected for the control group. The **Results of the study was** enrolled after four weeks mothers in the intervention group reported, those are in the control group they having less stress (mean score 1.54 v. 2.93, $p < 0.001$). After enrolment of the sixteenth weeks, the intervention group reported less anxiety state (mean score 31.4 v. 38.6, $p < 0.05$), less depression (mean score

2.20 v. 4.88, $p < 0.01$) and greater perceived social support (mean score 6.49 v. 5.48, $p < 0.01$) than in the control group. This study shows that there was no difference between the groups in terms of trait anxiety. The twenty four mothers who evaluated the program, 21 (87.5%) indicated that it was very helpful or helpful.

Kang et al., (1995) conducted a study on preterm Infant Follow-up Project a multi-Site field experiment of hospital and home intervention programs for mothers and preterm infants. The sample consisted of the study was 327 mothers with preterm infants who were less than 36 weeks of gestational age. The mothers were randomly assigned to intervention groups on the basis of their education. The high education (HE) was in ≤ 13 years of education, while low education (LE) was ≥ 12 years of education. High education mothers were randomly assigned to the hospital programs, while low education mothers were randomly assigned to the combinations of hospital and home visit programs. The evaluation of the study were conducted at forty weeks of gestational age (expected date of birth), at 46 weeks conceptual age (1.5-months-corrected age), and 60 weeks conceptual age (5-months-corrected age).

Section C: Literature related to coping abilities of mothers with premature babies

Padmavathi R et al., (2011) conducted a study to assess the level of stress and coping strategies of mothers of neonates admitted in NICU. Descriptive design was adopted in this study. Researcher used purposive sampling method. The study sample was 100 neonatal mothers. Descriptive and inferential statistical method was used to analyze the data. Among 100 mothers 34% mothers had mild stress 28% mothers had moderate stress 38% mothers had severe stress. Among 100 mothers 25% mothers had poor coping ability 50% mothers had moderate coping ability and 25% mothers had good coping ability. There is a high significant relationship between stress and coping strategies at p= 0.05 level. There is no significant relationship between the stress and coping strategies with demographic characteristics. The amount of stress of mothers of neonates experience was as a result of the NICU admission. Health care professionals should work out a plan for educational programme, based on stress level. This will help the mothers to gain the knowledge on coping strategies.

Veddovi M et al., (2010) conducted a study on the relationship between depressive symptoms following premature birth, mothers coping style, and knowledge of the infant development. Researcher selected a sample of 30 mothers. There are three factors accounted for 48.1%. The mother's depressive status was assessed through Edinburgh Postnatal Depression

Scale. There is no associated difference between the premature infants' characteristics or other maternal factors (age, education and occupation) the data was suggest that educating mothers of premature infants about infant development may be protective against the development of depressive symptoms in the postpartum period.

Hala M et al., (2009) conducted a study on the parental experience of having an infant in the newborn intensive care unit. Systematic review was used in this study. The study to explored and described the experience of parents with their babies in the newborn intensive care unit (NICU. Fourteen articles were reporting qualitative studies describing parental experiences and meeting the inclusion criteria were evaluate, and the themes were identified. The conclusion of the study was revealed that the parents with an infant in the NICU had experience of loss of control, depression, stress, anxiety, etc... Nursing interventions given to the mothers to provide positive psychosocial outcomes are needed to decrease parental feelings of stress, anxiety, and loss of control.

Turkan et al., (2008) conducted a study on Effect of nursing interventions on stressors of parents of premature infants in neonatal intensive care unit. Researcher used Randomized intervention. The researcher used experimental group and control group. Results of the study was the difference between the experimental group and the control group mothers mean stress score was found. And it was statistically significant ($t = 4{\cdot}05$, $p < 0{\cdot}05$). The study results was determined that the stress scores for the fathers in the treatment group were lower, but the difference between the two groups was not found to be statistically significant ($p > 0{\cdot}05$).

Wigert et al., (2006) conducted a study on Mothers' experiences of having their newborn child in a neonatal intensive care unit. Interview method was used in this study. After the experience ten mothers were interviewed upto 6 months to 6 years. The result the study was the nurses provide the support to the mother. It was decrease the mother's experience of exclusion and to increase of their feeling of participation when their child is cared for in a NICU. A return visit of to the responsible nurse to go through the treatment and experiences should be offered to all parents whose child has been cared for in a NICU.

Jotzo **et al., (2005)** conducted a study on Helping Parents Cope with the Trauma of Premature Birth, An Evaluation of a Trauma-Preventive Psychological Intervention. Method used in this study, Mothers of premature infants was included consecutively in a sequential

control group design. *Result of the study was during* their discharge, experimental group mothers (N = 25) showed that significantly lower levels of symptomatic response to the traumatic stress or "premature birth" than those in the control group (N = 25; mean overall symptom level 25.2).

Franck LS **et al., (2005**) conducted a study on measuring neonatal intensive care unit-related parental stress methods. Researcher selected 257 samples in this study. The conclusion of the study was the three-factor principal components solution was accounted for 66% of the variance in the scores of the items grouped into the three prior scales specified in the NICU (Infant Behavior and Appearance, Parental Role Alterations, and Sounds and Sights). Stress Occurrence and Overall Stress were moderately correlated with State Anxiety in both samples (r = 0.46-0.61, P < 0.001). Thirty-one per cent of the variance in Stress Occurrence in the UK sample was explained by infant severity of illness score, State Anxiety, less frequent visitation and parent gender.

Melnyk et al., (2001) conducted a study on improving cognitive development of low-birth-weight premature infants with the COPE program. Researcher conducted a pilot study to evaluate the effectiveness of a parent-focused intervention program (COPE) on infant cognitive development and maternal coping. A randomized clinical trial was used in this study. Forty two mothers were included in this study. Results of the study was indicated that COPE infants had significantly higher mental development scores at a 3 months' corrected age (M = 100.3). The COPE program mothers were significantly having less stressed by the NICU area and sounds and had significantly stronger beliefs about what behaviors and characteristics to expect from their premature infants. The conclusion of this study was to support and provide necessary need for further testing of early NICU interventions with parents to determine their effectiveness on infant developmental outcomes and parental coping.

Copper **L et al., (1996)** conducted a study on Maternal stress is associated with spontaneous preterm birth at less than thirty-five weeks' gestation .**Study was included among** 2593 gravid women by use of a 28-item Likert scale. The **Result of the study was** shows that for each point on the scale, respectively, the stress level was significantly associated with spontaneous preterm birth and with low birth weight with the odds ratios of 1.16, p = 0.003, and 1.08, p = 0.02.The low score on the combined scale or on any subscale other than stress did not predict fetal growth restriction, spontaneous preterm birth, and low birth weight. After multivariate adjustment were performed for substance use, psychosocial status, and demographic

traits. The black race was had the variable, significantly associated with spontaneous preterm birth; low birth weight, fetal growth restriction, and stress and low education were associated with spontaneous preterm birth and low birth weight.

Section D: Literature to effectiveness of teaching on caring skills of premature babies

Vasundhara Reddy (2012) conducted a study to evaluate the effectiveness of planned teaching programme on kangaroo mother care among health workers at grass root level who come in direct contact with the families in the villages where most of our population resides. The design of the study is one group pretest and posttest. 30 subjects were selected from this study. The mean pretest score was 11.2 and post test was 15.05.the calculated' value was 3.5 which was more than the table value 2.045.hence there was significant difference pretest and post test knowledge score

Meera K (2009) conducted a study on effectiveness of structured teaching programme on knowledge and practice of kangaroo mother care among postnatal mothers of preterm babies in institute of obstetrics and gynecology and their home setting. The researcher using a convenient sampling technique. The result of this study was the important mean score is 6.83(s=1.49) in the pretest and 19.2(S=1.52) in the post test with't' value of 31.01 shows the significant at p= 0.001 level. The correlation of knowledge and practice shows that there is substantial positive relationship between them at r=+0.66 p=0.001.

CHAPTER –III

METHODOLOGY

This chapter deals with the methodology adapted by the investigator to assess the caring skills and coping abilities of mothers with premature babies. It deals with the research design, variables under study, setting of the study, population, sample size, sampling technique, criteria for selection of sample, description of the intervention, development and description of the tool, content validity, pilot study, reliability, procedure for data collection and statistical analysis.

RESEARCH DESIGN

Single group pretest posttest pre experimental design was adapted for this study. Schematically the research design is represented as follows,

$$O_1 \; X \; O_2$$

O_1 – Pretest assessment of caring skills of mothers with premature babies

X – Educational intervention on care of premature babies

O_2 – Post test assessment of caring skills and coping abilities of mothers with premature babies

VARIABLES UNDER STUDY

Independent Variable - Educational Intervention on Care of Premature Babies.

Dependent variable - Caring skills and coping abilities of mothers with premature babies

SETTING OF THE STUDY

The study was conducted at KMCH maternity wards and NICU. KMCH is one of the reputed institutions in Coimbatore, is a NABH accredited multispecialty high tech hospital consisting of 800 beds with well equipped facilities and has various specialties like Cardiology, Neurology, Orthopedics, Interventional radiology, Pediatrics Obstetrics and Gynecology, Oncology etc… Out of 800 beds, 60 are allotted for obstetric cases that includes antenatal ward, post natal ward separately.

The maternity ward and Neonatology ward consist of 70 beds. In KMCH nearly 200-250 mothers undergoing vaginal delivery and caesarean section in a month. Out of this 20-30 babies are preterm, admitted in NICU per month.

POPULATION OF THE STUDY

The study population consists of mothers of premature babies

SAMPLE SIZE

The sample size for this study was 40 mothers with premature babies

SAMPLE TECHNIQUE

Non probability purposive sampling technique was adapted for this study.

CRITERIA FOR THE SELECTION OF SAMPLE

INCLUSION CRITERIA:

- Mothers who have given birth to child before 37 weeks of gestational period.
- Mothers who have premature child with birth weight less than 2.5 kg,
- Babies who are admitted in NICU.
- Mothers who can read Tamil and English

EXCLUSION CRITERIA

- Mothers of babies with significant neurological disorder such as intra ventricular hemorrhage
- Mothers with postpartum discomforts /diseases that restrict their involvement in care of their babies.

DESCRIPTION OF THE INTERVENTION

The intervention for the present study is Computer Assisted Teaching regarding care of mothers with premature babies on various aspects such as respiratory support, cardiac support, thermoregulation, feeding methods of premature babies, kangaroo mother care, infection control. The computer assisted teaching was given in a one to one basis, for about 30-45 minutes. Doubts regarding the caring skills of mothers with premature babies raised by the mothers were clarified. The investigator prepared computer assisted teaching was displayed to the experts for content validity and ethically approved. Suggestions were considered

DEVELOPMENT AND DESCRIPTION OF TOOL

The tool was developed for the purpose of obtaining data for the study. The tool was developed by the researcher on reviewing literature, in consultation with medical and nursing experts in the field of obstetrical and gynecological nursing and Neonatology.

The tool consists of 3 sections.

SECTION A: Demographic profile

SECTION B: Self administered questionnaire

SECTION C: Modified Coping health inventory for parents

SECTION A:

DEMOGRAPHIC PROFILE

Mother: It includes Age, Education, Occupation, Religion, Monthly Income, Years of marriage and Type of family

Baby: Sex of the baby, Weight of the baby, Mode of delivery, Duration of in NICU

SECTION B

The researcher developed structured self administered questionnaire. This consist of 20 multiple choice questions to assess the caring skills of mothers with premature babies. Questions covered various aspects of caring skills such as premature babies, infection control, feeding, kangaroo mother care. Each correct answer was given one mark and wrong answer was given zero mark. Maximum score was 20 and minimum score was zero.

SECTION C

Modified Coping health inventory for parents (MCHIP), a 42 item instrument was used to assess mother's perception of coping strategies they will be using to manage family life when they had a seriously or chronically ill child. Mothers will be asked to record how helpful each coping strategy will be in their family situation on a scale of 0-3, with 0 indicating "not helpful" and 3 indicating "extremely helpful". The instrument has to measures three coping pattern. First coping pattern family integration, co-operation, and an optimistic definition of the situation, consists of 16 coping strategies that focus on strengthening family life and relationship and the parents, outlook on life with a chronically ill child, coping pattern II, maintaining social support, self esteem, and psychological stability is composed of 18 coping strategies that involve the parents efforts to develop relationship with others engage in activities that enhance feelings of

individual identity and self worth plus strategies to manage psychological tensions and pressures, coping pattern III ,understanding the health care situation through communication with other parents and consultation with the health care team ,contained eight coping strategies directed at the parents relationships with the health care professionals and other parents of chronically ill children.

CONTENT VALIDITY OF THE TOOL

The content validity of the tool was obtained from in the field of pediatrics, nursing and medicine. The translated Tamil tool was also validated by the experts in Tamil. All recommendations and suggestions given by the experts were duly considered and corrections were made.

RELIABILITY

The reliability of the tool was tested with Guttmann split half method and the reliability co efficient for the tool were as follows

Caring skills regarding care of premature babies r =0.73

Coping abilities of mothers with premature babies r =0.79

PILOT STUDY

Pilot study was conducted among 6 mothers with premature babies at KMCH hospital for a period of one week. The result of the pilot study revealed that the study was feasible.

PROCEDURE FOR DATA COLLECTION

Prior permission was obtained from the chairman, KMCH, Coimbatore, by submitting an application. Similarly permission was obtained from my medical and nursing guide. The study was conducted for a period of 6 weeks. The investigator selected mothers with premature babies who fulfilled inclusion criteria. The purpose of the study and the methods of data collection were explained to the participants and informed consent was taken from them. Pretest conducted on day 2 of admission of the baby in NICU by administering self administered questionnaire and modified coping health inventory for parents to assess the caring skills and coping abilities of mothers. Each sample took 15 to 30 minutes to complete the questionnaire. On the 3rd day computer assisted educational intervention on caring skills of mothers with premature babies was given 20-30 minutes. After 7 days of intervention post test was conducted to assess the caring skills and coping abilities of mothers by using same tools. The investigator assessed the caring skills and coping abilities of mothers of premature babies.

STATISTICAL ANALYSIS

Data is analyzed by descriptive (Mean and Percentage) and inferential statistics (Chi-square, paired't' test and correlation coefficient) were used to analyze the data. Correlation coefficient was used to correlate the caring skills and coping ability of the mothers with premature babies. Paired't' test was used to compare the pretest and post test caring skills of mothers with premature babies. Chi-square test was used to find the association between caring skills and coping abilities of the mothers with premature babies with selected demographic variables.

CHAPTER –IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of the study subjects, classification analysis and interpretation of data collected to evaluate the effectiveness of caring skills and coping abilities of mothers with premature babies. The collected data is analyzed under the following headings.

Section A : Description of demographic profile of the mothers and premature babies.

Section B : Assessing the knowledge level caring skills of mothers with premature babies

Section C : Determine the effect of educational intervention on knowledge regarding caring Skills and coping ability of mothers with premature babies

Section D : Assessing the level of coping abilities of mothers with premature babies

Section E: Co-relation between caring skills and coping abilities of mothers with premature Babies

Section F: Association between the caring skills and coping abilities of mothers with premature Babies with demographic variables of the mothers

SECTION –A

Table-1: Distribution of the subjects according to their demographic Profile of mothers with premature babies (N=40)

S.No	Characteristics	Number of Respondents(n=40)	Percentage (%)
1.	**AGE**		
	a) <20 years	3	7.5%
	b) 21-30 years	29	72.5%
	c) 31-40 years	7	17.5%
	d) More than 40 years	1	2.5%
2	**EDUCATION**		
	a) Upto SSLC	5	12.5%
	b) Higher secondary	10	25%
	c) Under Graduate	12	30%
	d) Post Graduate	13	32.5%
3	**OCCUPATION**		
	a) Employed	8	20%
	b) Unemployed	32	80%
4	**RELIGION**		
	a) Hindu	37	92.5%
	b) Christian	2	5%
	c) Muslim	1	2.5%
5	**MONTHLY INCOME**		
	a) Less than 10,000	15	37.5%
	b) 11000-20000	16	40%
	c) 21000-30000	7	17.5%
	d) Above 31000	2	5%

6	**YEARS OF MARRIAGE**		
	a) Less than 1 year	3	7.5%
	b) 1-5 years	25	62.5%
	c) 6-10 years	9	22.5%
	d) 11-15 years	2	5%
	e) More than 15 years	1	2.5%
7	**TYPE OF FAMILY**		
	a) Nuclear	25	62.5%
	b) Joint	15	37.5%

The table 1 shows the demographic variables of the subjects. Among 40 samples 3(7.5%) mothers of premature babies were up to <20 years of age group and 29(72.5%) were between the age group of 21 to 30 years and 7(17.5%) were between the age group of 31to 40 years and (2.5%) were under the age group of more than 40 years. Regarding education out of 40 mothers, 5(12.5%) were up to SSLC, 10(25%) were higher secondary, 12(30%) were under graduate and 13(32.5%) were post graduate. Regarding occupation out of 40 mothers 8(20%) were employed and 32(80%) were unemployed. Regarding religion 37(92.5%) mothers were Hindu 2(5%) were Christian and 1(3.5%) were Muslim. Regarding monthly income 15(37.5%) were less than 10,000 and 16(40%) were between 11000-20000 and 7(17.5%) were between 21000-30000 and 2(5%) were above 31000. Regarding years of marriage 3(7.5%) were less than 1 year, 25(62.5%) were between 1to 5 years, 9(22.5%) were between 6-10 years, 2(5%) were between 11-15years and 1(2.5%) were more than 15 years. Regarding type of family25 (62.5%) were nuclear family and 15(37.5%) joint family.

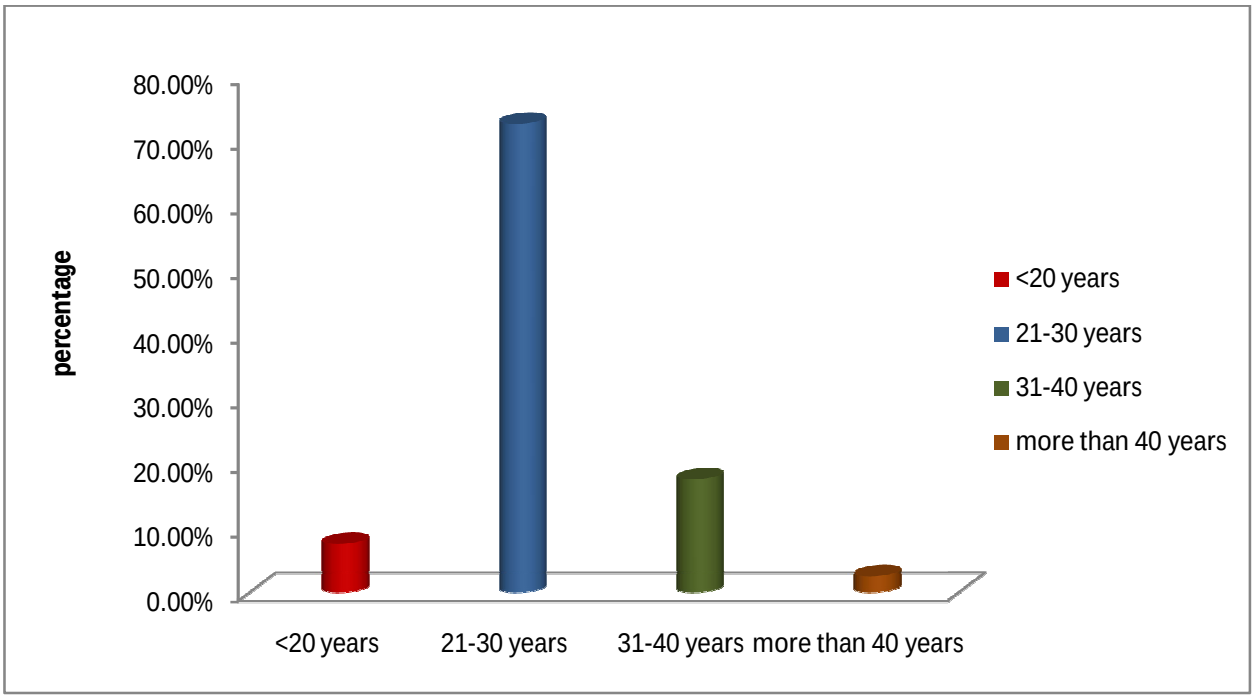

Figure 2: Distribution of the subjects according to the age of the mother

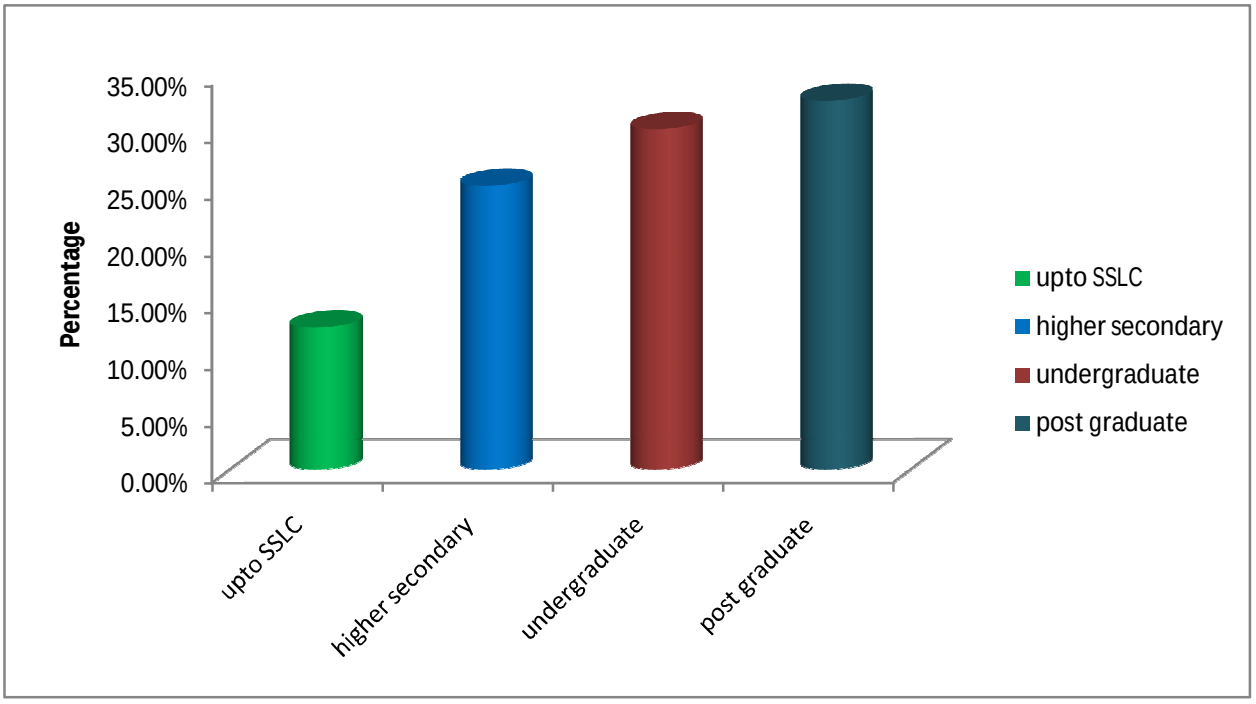

Figure 3: Distribution of the subjects according to their education

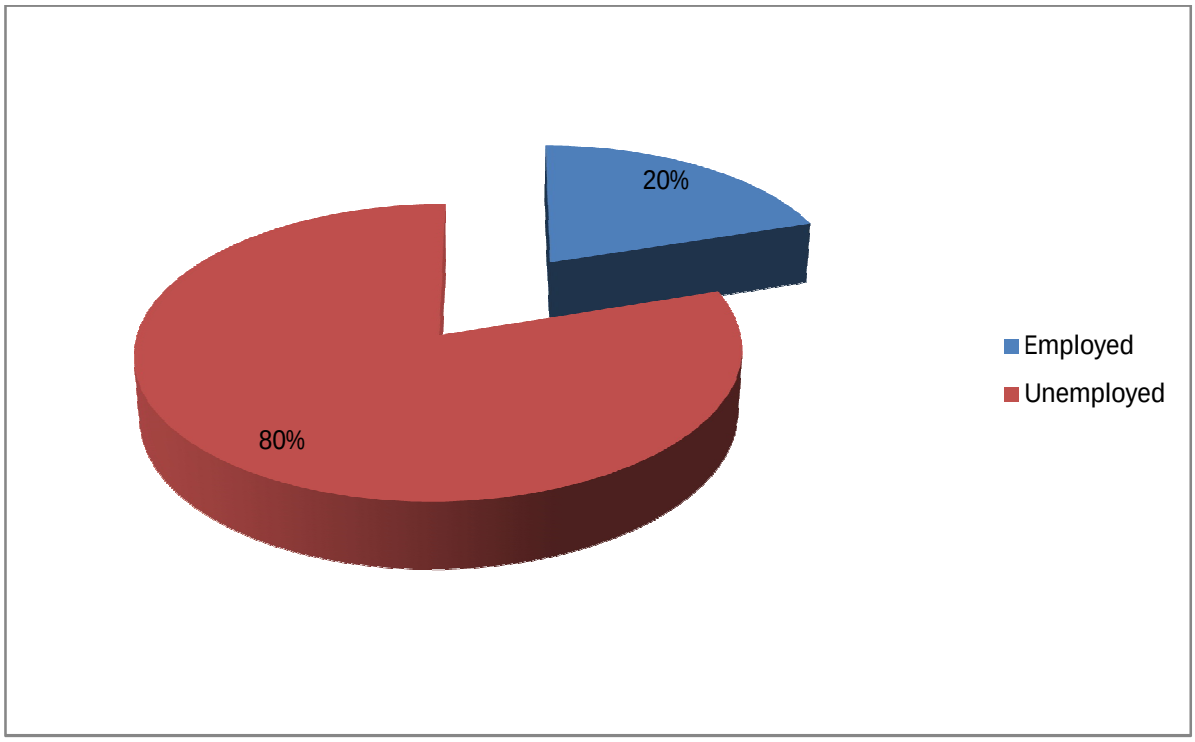

Figure 4: Distribution of the subjects according to their occupation

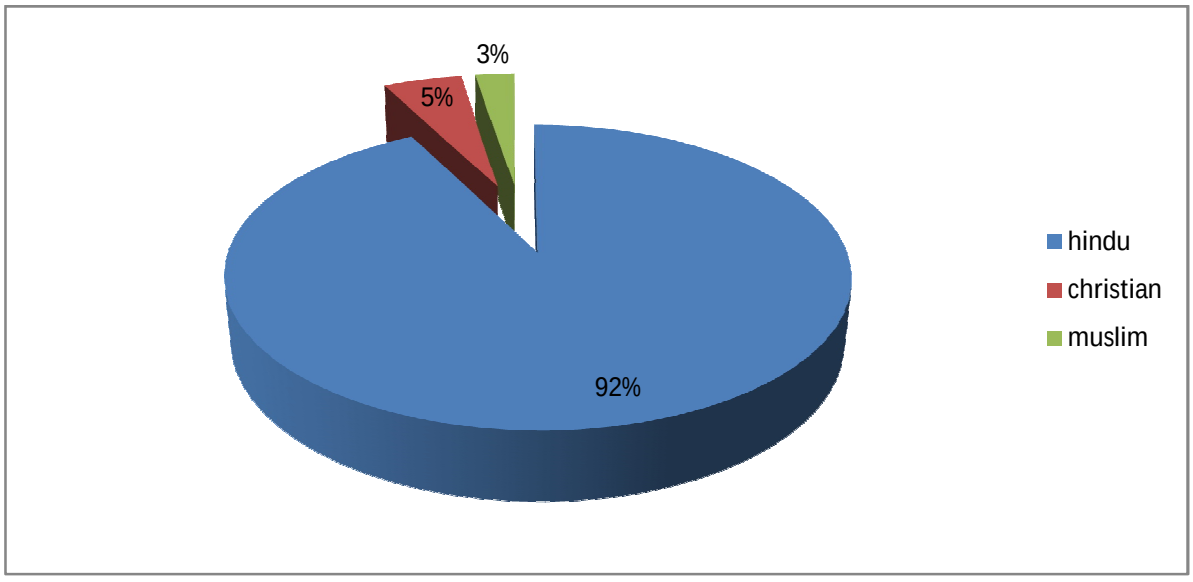

Figure 5: Distribution of the subjects according to the Religion

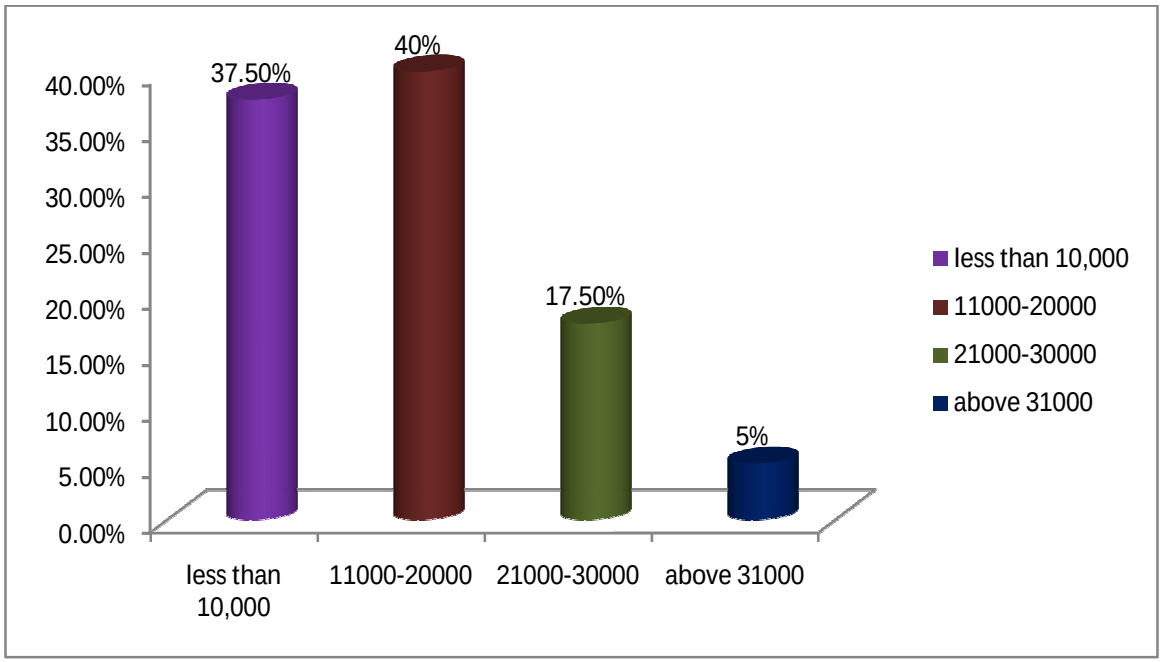

Figure6: Distribution of the subjects according to their monthly income

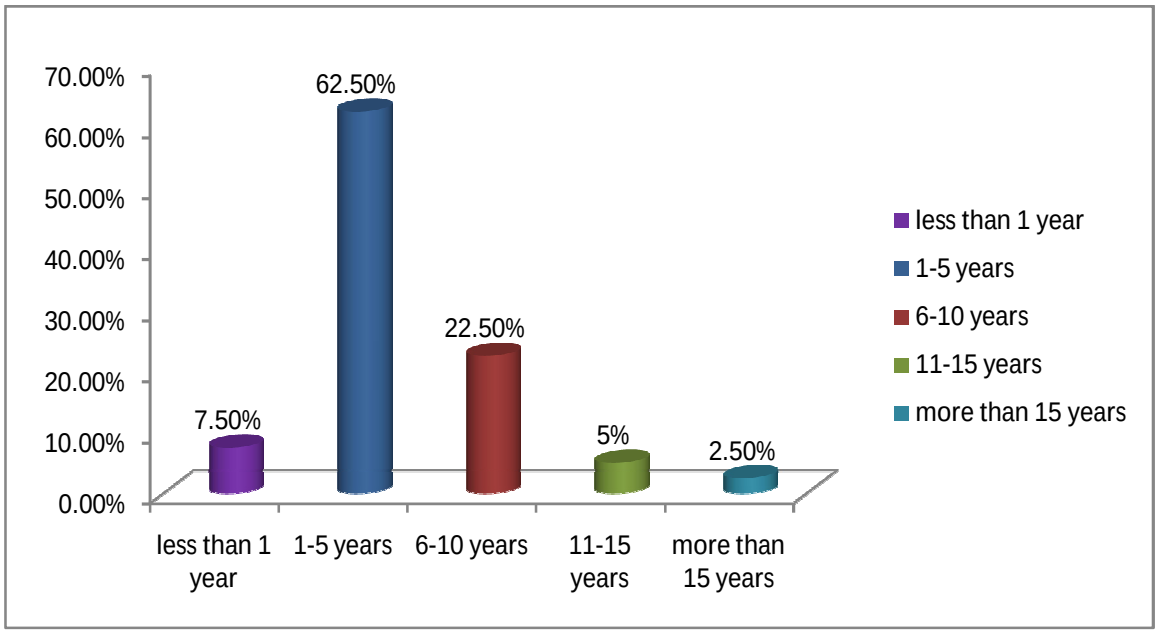

Figure 7: Distribution of the subjects according to their marital status

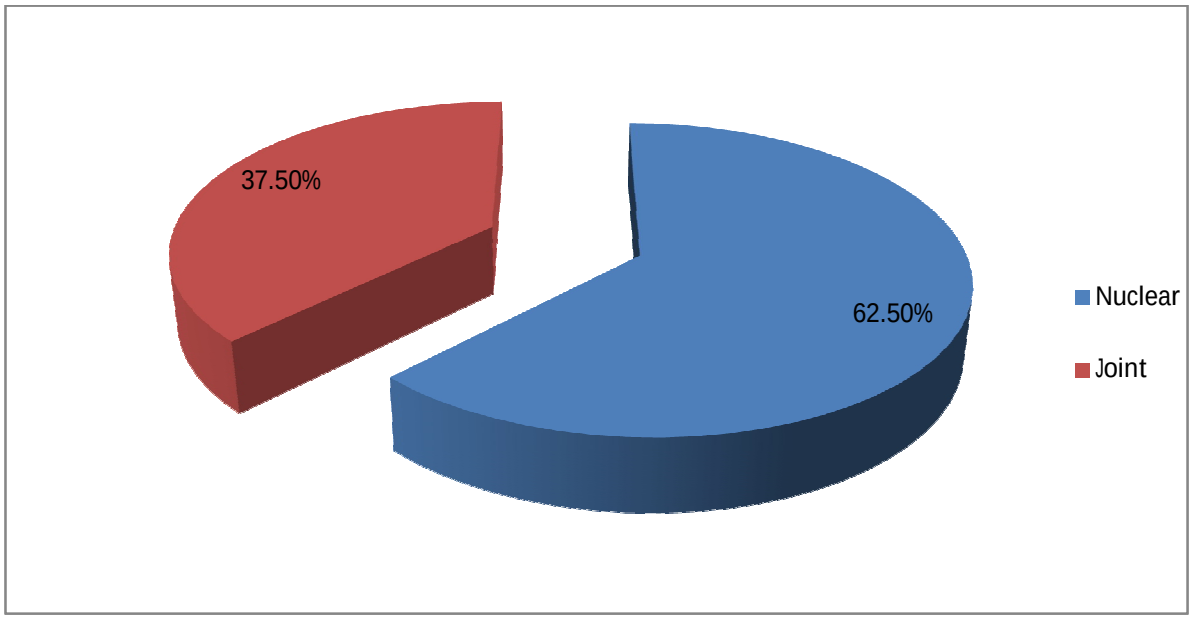

Figure 8: **Distribution of the subjects according to their types of family**

Table -2: Distribution of the subjects according to their demographic Profile of premature babies (N=40)

S.No	Characteristics	Number of Respondents	Percentage
1.	**SEX**		
	a)Female	15	37.5%
	b)Male	25	62.5%
2.	**WEIGHT OF THE BABY**		
	a)Less than 1Kg	7	17.5%
	b)1-1.5Kg	11	27.5%
	c)1.6-2Kg	8	20%
	d)More than 2Kg	14	35%
3.	**MODE OF DELIVERY**		
	a)Normal vaginal Delivery	8	20%
	b)caesarean Delivery	32	80%
4.	**GESTATIONAL WEEKS**		
	a)Less than 28 weeks	5	12.5%
	b)29-32 weeks	7	17.5%
	c)33-35 weeks	22	55%
	d)More than 35 weeks	6	15%
5.	**DURATION OF IN NICU**		
	a)Less than 10 days		
	b)10-20 days	19	47.5%
	c)21-40 days	10	25%
	d)above 40 days	9	22.5%
		2	5%

Table 2: Distribution of the subjects according to their demographic Profile of the premature babies. Among 40 samples 15 (37.5%) babies were female and 25 (62.5%) were male babies. Regarding weight of the baby 7(16.27%) were less than 1kg, 11(25.5%) were between 1-1.5 kg, 8(18.6%) babies were 1.6-2 kg, 17(39.5%) were more than 2kg. Regarding mode of delivery 8(20%) were normal delivery and 32(80%) were caesarean section. Regarding gestational weeks 5(12.5%) were less than 28 weeks, 7(17.5%were between 29-30 weeks of gestation, 22(55%) were between 33-35 weeks of gestation, and 6(15%) were more than 35 weeks. Regarding number of hospitalization 19(47.5%) were less than 10 days, 10(25%) were between 10-20 days, 9(22.5%) were between 21-40 days and 2(5%) were above 40 days.

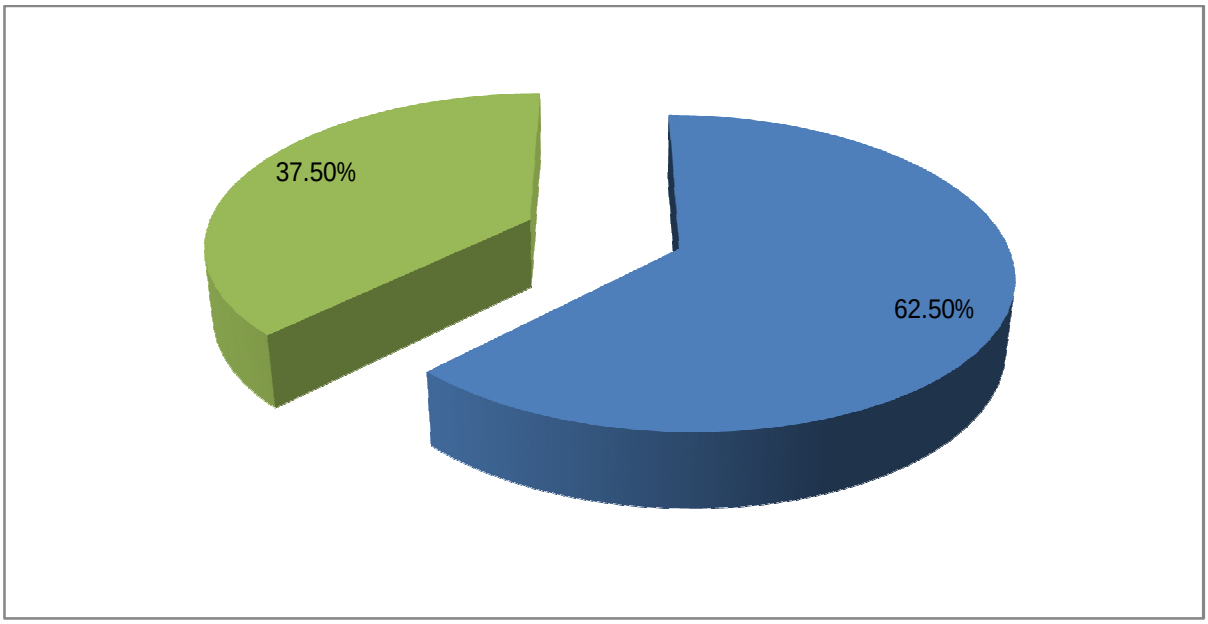

Figure 9: Distribution of the subjects according to the sex of the baby

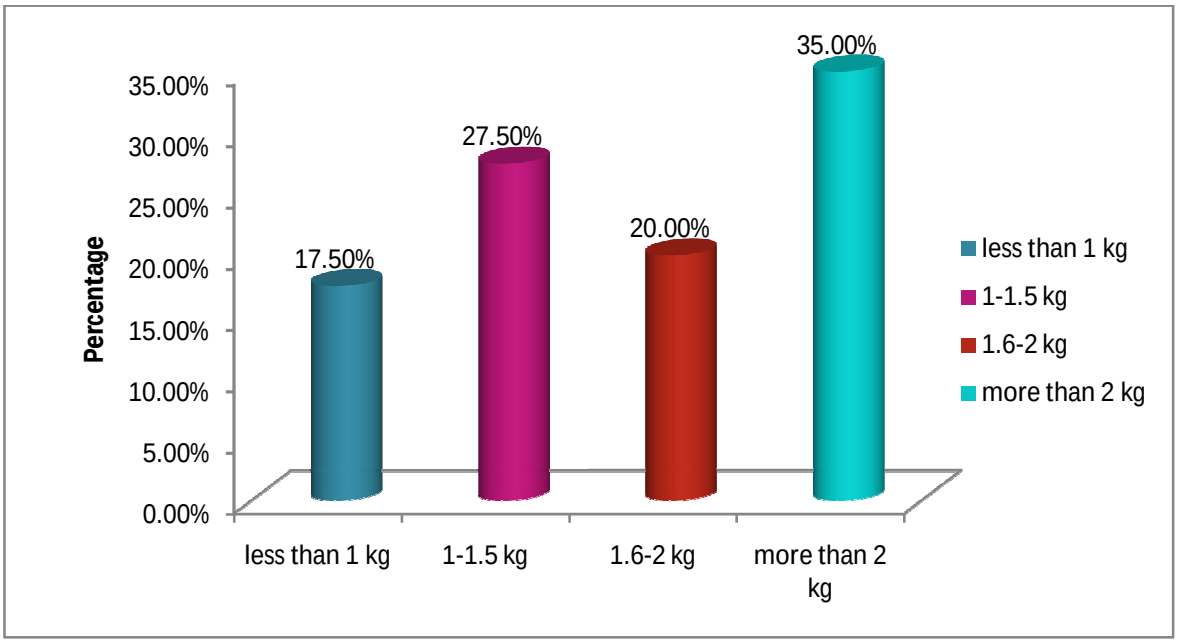

Figure 10: Distribution of the subjects according to the weight of the baby

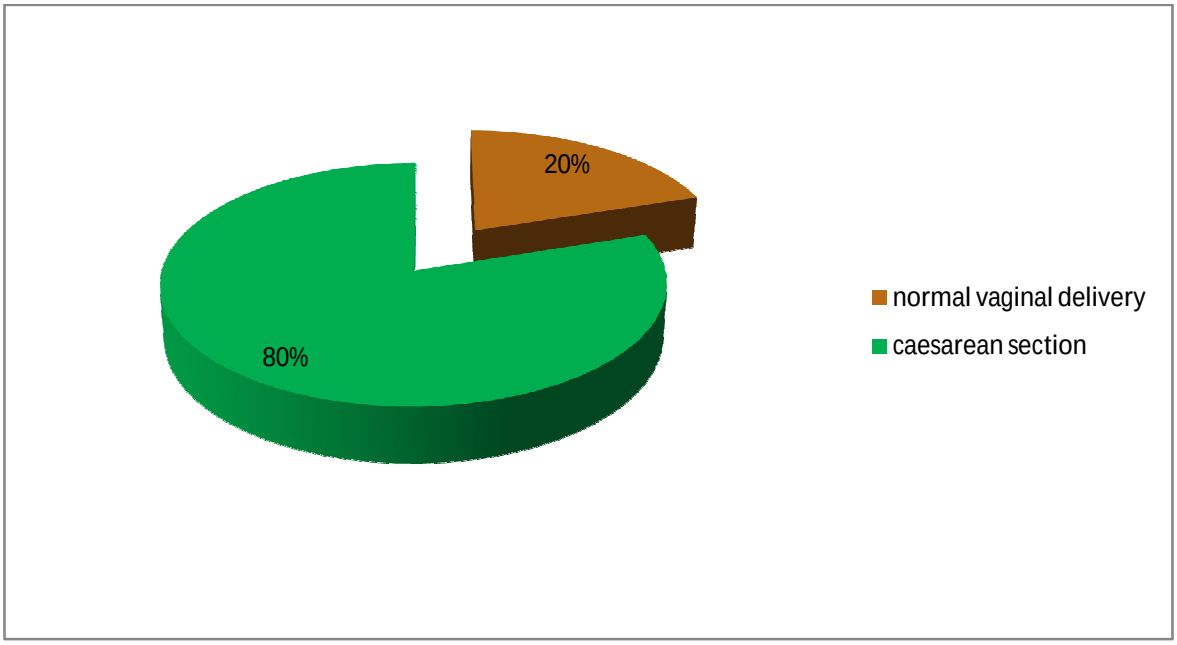

Figure11: Distribution of the subjects according to the mode of delivery

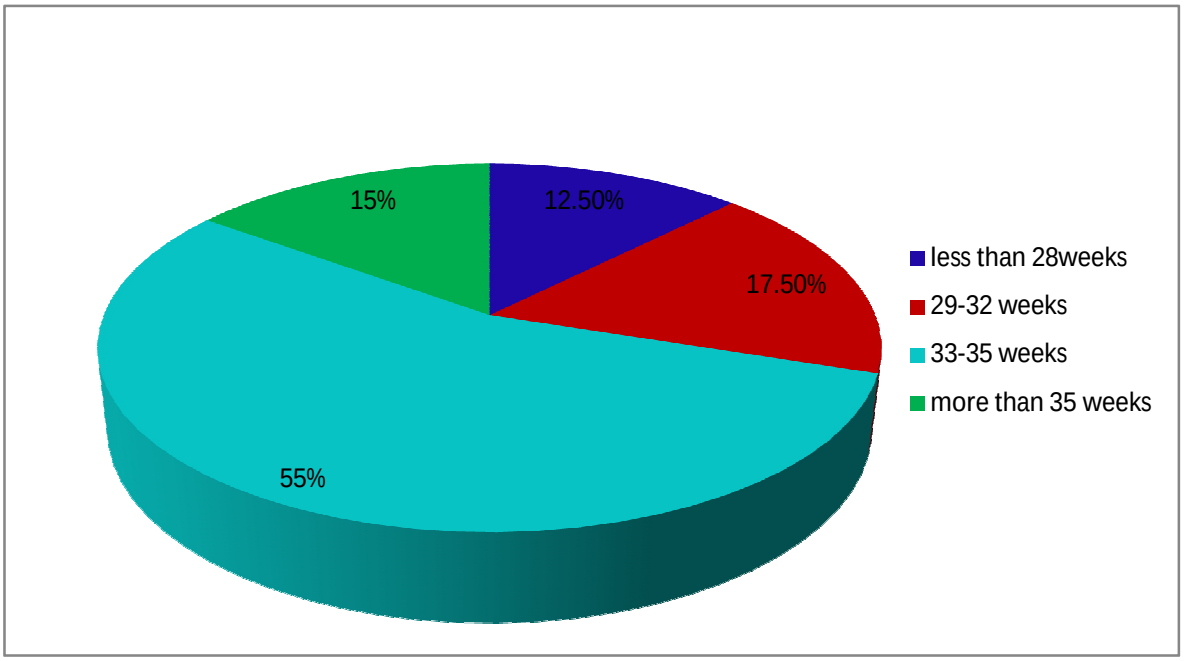

Figure 12: Distribution of the subjects according to the gestational weeks

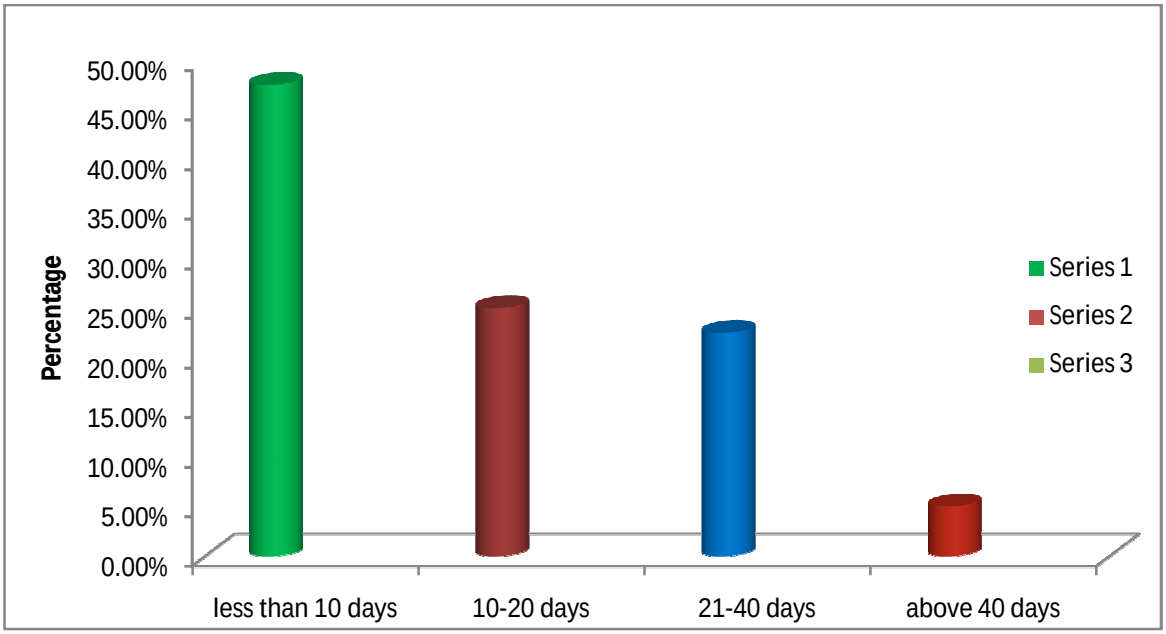

Figure 13: Distribution of the subjects according to the duration of NICU

SECTION – B

Table 3: **Distribution of pretest knowledge regarding caring skills of mothers with premature babies**

S.No	Mean pretest levels of knowledge score	No of respondents (n=40)	Percentage (%)
1	Excellent (76-100%)	0	0.00%
2	Good (51-75%)	26	65%
3	Average (26-50%)	14	35%
4	Poor (0-25%)	0	0.00%
Total		40	100%

Table no 3 shows that maximum sample subject 65%were good knowledge regarding caring skills, 35% were average knowledge regarding caring skills and no one had excellent and poor knowledge.

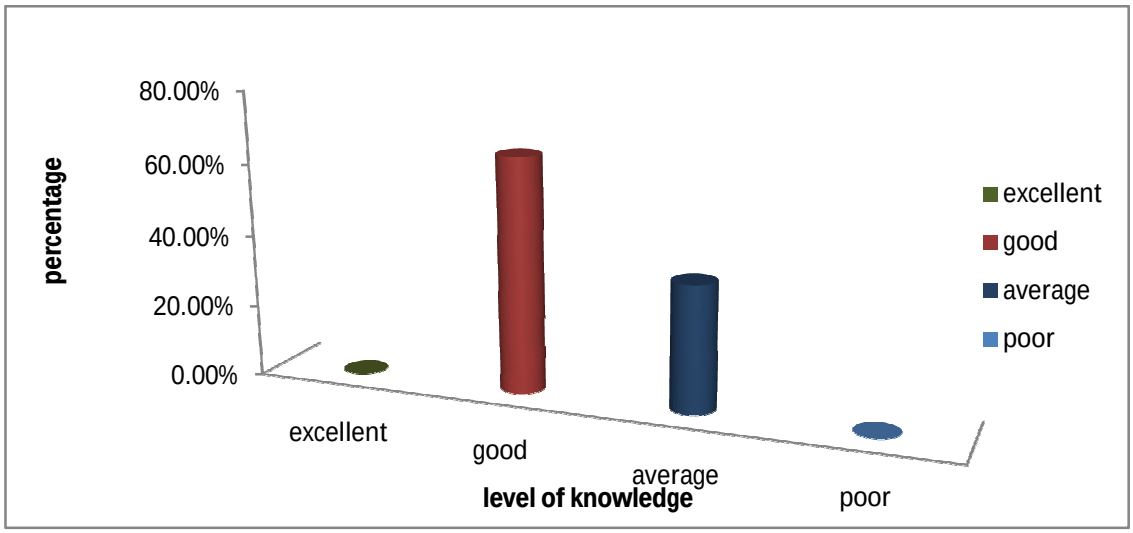

Figure14: Description the level of pretest knowledge regarding caring skills of mothers with premature babies

Table no4: Distribution of overall percentage, mean and standard deviation of pretest knowledge regarding caring skills of mothers with premature babies

Overall pretest knowledge regarding caring skills	No of questions	Mean	SD	Percentage
	20	12.12	2.40	60.6%

Table no 4 reveals that in the pretest, the percentage of knowledge regarding caring skills of mothers with premature babies was only 60.6%, with mean 12.12 and standard deviation 2.40.

Table 5: Distribution of post test knowledge regarding caring skills of mothers with premature babies

S.No	Mean post test levels of knowledge score	No of respondents (n=40)	Percentage (%)
1	Excellent (76-100%)	32	80%
2	Good (51-75%)	8	20%
3	Average (26-50%)	0	0%
4	Poor (0-25%)	0	0%
Total		40	100%

Table no 5 shows that maximum sample subject 80%were excellent caring skills, 20% were good caring skills and no one had average and poor knowledge

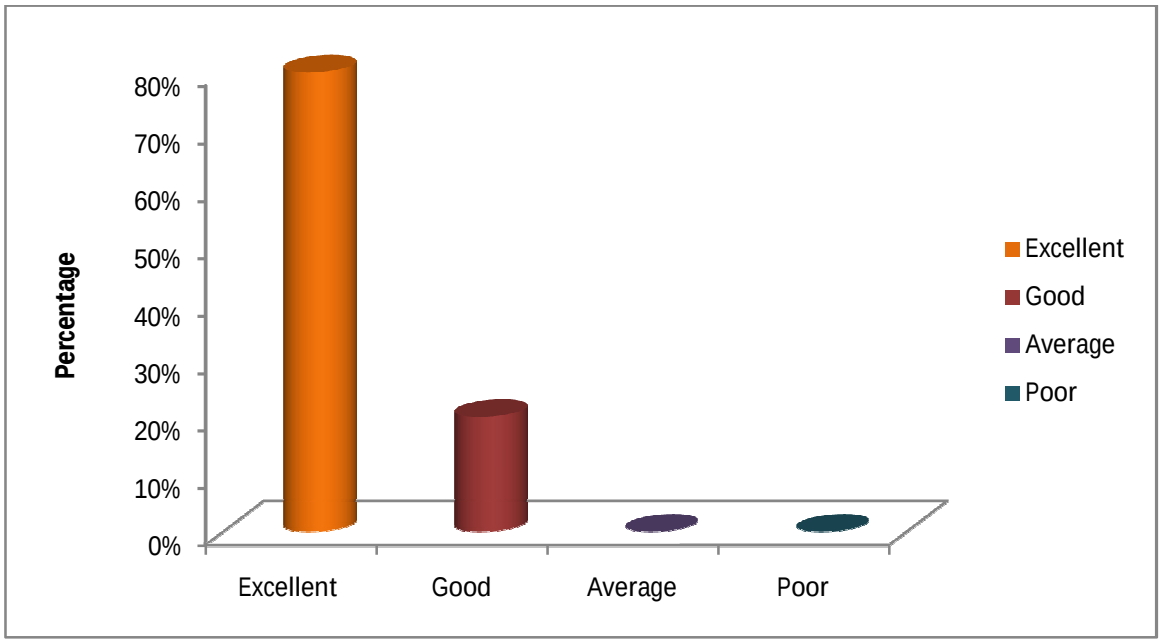

Figure 15: Description of the level of post test knowledge regarding caring skills of mothers with premature babies

Table 6: Overall percentage, mean and standard deviation of post test knowledge regarding caring skills of mothers with premature babies

Overall post test knowledge regarding caring skills	No of questions	Mean	SD	Percentage
	20	18	2.03	90%

Table no 6 reveals that in the posttest, the percentage of knowledge regarding caring skills of mothers with premature babies was only 90%, with mean 18 and standard deviation 2.03.

SECTION – C

Table7: Determine the effect of educational intervention on knowledge regarding caring skills of mothers with premature babies

Overall knowledge regarding caring skills	**Pre test Mean± SD**	**Post test Mean ± SD**	**Paired 't' test**	**5%level of significance**
	12.12±2.40	**18±2.03**	**21.32**	**df=39 significant**

Table No 7 shows that, in pretest the overall knowledge regarding caring skill was 12.12 ± 2.40, but after the administration of the teaching module, the overall improvement in the knowledge regarding caring skill was 18±2.03. The difference between the pretest and post test knowledge regarding caring skill score was high and significant.

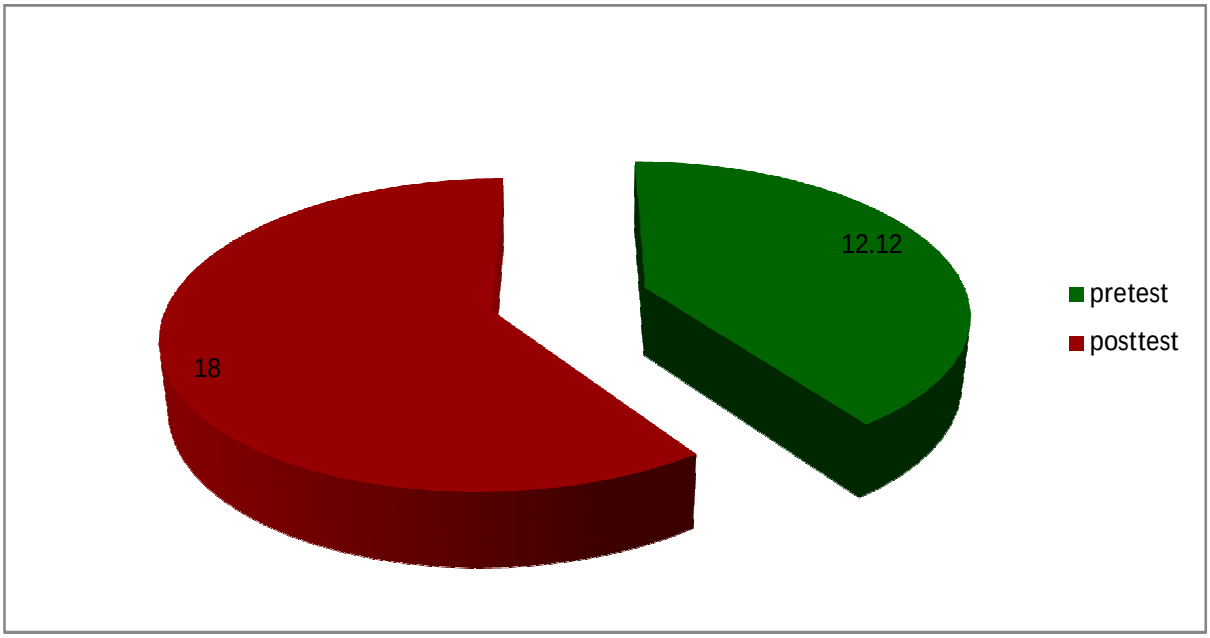

Figure 16: Determination of the mean pretest and post test knowledge regarding caring skill score of the subjects

SECTION- D

Table 8: Assessing the level of coping abilities of mothers with premature babies

Level of coping	No of Respondents (n=40)	Percentage (%)
Adaptive (>50%) Non Adaptive (≤50%)	34 6	85 15
Total	40	100

Table 9: overall percentage, mean, and standard deviation of coping score of mothers with premature babies

Overall coping ability	Number of questions	Mean	SD	Percentage (%)
	42	82.65	8.97	65.59%

Table 9 shows that**,** the percentage of coping ability of mothers with premature babies was only 65.59%, with mean 82.65 and standard deviation 8.97

SECTION -E

Table 10: Co-relation between caring skills and coping abilities of mothers with premature babies

S.No	Aspects	Number of Respondents	Mean	SD	Coefficient of correlation
1	Post test caring skills	40	18.0	2.03	0.763
2	Coping abilities	40	82.65	8.97	

Table 10 shows that the correlation between caring skills and coping ability of the mothers was computed using the karl pearson correlation coefficient, and was found to be high degree positive correlation for r=0.763at p = 0.01. It shows that the caring skill was positively correlated with their coping ability score. This shows that, when the caring skills increase the coping score will be increased**.**

SECTION -F

Table 11: Association between post test caring skills and demographic variables of mothers with premature babies

S.No	Demographic variables	Caring skills		Total	Chi square	5%level of significant
		Excellent	Good			
1.	**AGE IN YEARS**					
	a) <20 years	0	3	3		df=3
	b) 21 - 30years	26	3	29	17.81	significant
	c)31-40years	5	2	7		
	d)more than 40 years	1	0	1		
2.	**EDUCATION**					
	a)Up to SSLC	3	2	5		df=3
	b)Higher secondary	8	2	10	1.61	(NS)
	c)under graduate	10	2	12		
	d)post graduate	11	2	13		
3.	OCCUPATION					
	a)employed	7	1	8	0.35	df=1
	b)unemployed	25	7	32		(NS)
4.	RELIGION					
	a) Hindu	31	6	37		df=2
	b) Christian	1	1	2	7.93	(significant)
	c) Muslim	0	1	1		
5.	**MONTHLY INCOME**					
	a)less than 10,000	12	3	15		df=3 (NS)
	b)11,000-20,000	13	3	16		
	c)21,000-30,000	6	1	7	2.89	
	d)above 31,000	1	1	2		

6.	**YEARS OF MARRIAGE** a)less than 1 year b)1-5 years c)6-10 years d)11-15 years e)More than 15 years	0 22 7 2 1	3 3 2 0 0	3 25 9 2 1	16.93	df=9.49 (significant)
7.	**TYPE OF FAMILY** a)Nuclear b)Joint	21 11	4 4	25 15	0.66	df=1 (NS)

Table11 shows that there is no association between caring skills and demographic variables of mother with premature babies like Education, Occupation Income, and Type of family except Age, Religion and Years of marriage

Table12: Association between coping level among mothers with premature babies with demographic variables

S.No	Demographic variables	Coping level		Total	Chi square	5%level of significant
		adaptive	Non adaptive			
1.	**AGE INYEARS**					
	a) <20 years	0	3	3		
	b) 21 - 30years	27	2	29	19.75	df=3
	c)31-40years	6	1	7		significant
	d)more than 40 years	1	0	1		
2.	**EDUCATION**					
	a)Upto SSLC	4	1	5		df=3
	b)Higher secondary	9	1	10	1.71	(NS)
	c)under graduate	10	2	12		
	d)post graduate	11	2	13		
3.	OCCUPATION					
	a)employed	7	1	8	0.049	df=1
	b)unemployed	27	5	32		(NS)
4.	RELIGION					
	a) Hindu	33	4	37	8.063	df=2
	b) Christian	1	1	2		(significant)
	c) Muslim	0	1	1		
5.	**MONTHLY INCOME**					
	a)less than 10,000	13	2	15		df=3
	b)11,000-20,000	14	2	16	2.08	(NS)
	c)21,000-30,000	6	1	7		
	d)above 31,000	1	1	2		

6.	**YEARS OF MARRIAGE** a)less than 1 year b)1-5 years c)6-10 years d)11-15 years e)More than 15 years	 0 23 8 2 1	 3 2 1 0 0	 3 25 9 2 1	 17.81 	 df=4 (significant)
7.	**TYPE OF FAMILY** a)Nuclear b)Joint	 23 11	 2 4	 25 15	 2.56 	 df=1 (NS)

Table12 shows that there is no association between coping abilities and demographic variables of mother with premature babies like Education, Occupation Income, and Type of family except Age, Religion and Years of marriage

CHAPTER V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter deals with discussion, summary and conclusions drawn. It clarifies the limitations of the study, the implications and recommendations given for different areas in Nursing practice, Nursing education, Administration and Research. The primary purpose of the intervention was, “care of premature babies”.

DISSCUSSION:

The birth of a baby before the developing organs is mature enough to allow normal postnatal survival. Premature infants are at greater risk for short and long term complications, including disabilities and impediments in growth and mental development. Significant progress has been made in the care of premature infants, but not in reducing the prevalence of preterm birth. Preterm birth is among the top causes of death in infants worldwide

DEMOGRAPHIC DESCRIPTION:

Mean age of the respondents were years. Most of the respondents were in the age group of 21-30 years (72.5%). In regard to education out of 40 respondents 13(32.5%) were post graduate, occupation 32(80%) were employed, religion 37 (92.5%) belonged to Hindu religion, with regard to monthly income 16(40%) were under 11000-20000, as for the years of marriage 25(62.5%) respondents were married for 1-5 years. Regarding type of family 25(62.5%) were in nuclear family.

Demographic variables of the babies were included, out of 40 mothers 25 (62.5%) were having male baby. Considering the weight of the baby 17 (39.5%) were having more than 2 kg, considering the type of delivery 32(80%) had LSCS. Regarding the gestational age 22(55%) was under 32+1-35 weeks of gestation. Regarding the number of hospitalization 19(47.5%) were less than 10 days.

The first objective of the study was to assess the caring skills of mothers with premature babies

The present study findings revealed that, the mean pretest knowledge score of the respondents were 12.12. The mean post test knowledge score obtained was 18. The findings revealed that, the mean coping abilities of mothers with premature baby was 82.65.

Chen TJ et al., (1998) conducted a study on effectiveness of videotape education for mothers of prematurity. The researcher selected Sixty two mothers were randomly assigned to a control group or experimental group. During hospitalization mothers were assigned to the experimental group received additional study regarding the knowledge and skills of caring for premature infants. The mothers in the control group received routine educational care. The findings indicated that mothers who received a videotape education reported having more knowledge and confidence of caring their preterm babies than the mothers who were in the control group. Moreover mothers in the experimental group have perceived lower stress than in the control group.

The second objective of the study was to determine the effect of educational intervention on caring skills and coping ability of mothers with premature babies

The present study findings revealed that, that the mean pretest and post test knowledge score of respondents before and after the educational intervention on care of premature babies were 12.12 and 18 respectively. The t' value is 21.32 for the mean difference in the pretest and post tests knowledge score of mothers with premature babies, it is significant at 0.05 levels. These findings substantiate that the educational intervention is effective intervention of knowledge gain.

The finding is consistent with swati.s.,(2013) conducted a study on to assess the effectiveness of structured teaching programme on knowledge regarding management of low birth weight babies among postnatal mothers in selected community. The researcher selected forty postnatal mothers. The convenient sampling technique was used in this study. Researcher used one group pretest posttest design. The finding of the study shows that the overall mean score of the subjects in pretest was 56.25% with the standard deviation of 2.80, and the overall mean score of the posttest was 76.25%with the standard deviation of 2.28. The 't'value 13.96 was greater than the table value. The result shows that to be a highly significant level of $p<0.005$. The finding of the evidenced structured teaching programme was effective and it was increasing the knowledge of the post natal mothers regarding management of low birth weight babies.

The findings revealed that, the mean coping abilities of mothers with premature baby was 82.65.the percentage of overall coping score was 65.59%.

The third objective of the study was to correlate the caring skills and coping abilities of mothers with premature babies

For correlation of caring skills and coping abilities of mother's formula of correlation coefficient was used. The obtained value is .76 which shows that there exists a correlation between the caring skills and coping abilities of mothers with premature babies.

The finding is consistent with Han, et al., study on the report of coping strategies and psychosocial adjustment in Korean mothers of children with cancer. Researcher selected 200 Korean mothers. The conclusion of this study was the Korean mothers reported coping strategies related to maintaining family integration of an optimistic outlook for the situation as being most helpful. The most frequent use of coping pattern was maintaining family integration and an optimistic outlook for the situation. And the less frequent use of coping pattern was the information seeking were significantly associated with lower physiological distress and better family relationship after children's medical and maternal characteristics were controlled for. Coping pattern, seeking social support was only predictive of social support.

The fourth objective of the study was to associate the caring skills and coping ability of mothers with selected demographic variables

In this study there is no association between pretest and posttest knowledge of caring skills and coping abilities of mothers with premature babies with demographic variables of mothers with premature babies (education, occupation monthly income and type of the family).

SUMMARY

The study was done to determine the effectiveness of educational intervention on caring skills and coping abilities of mothers with premature babies in KMCH hospital at Coimbatore, for which the following objectives are formulated.

- Assess the caring skills of mothers with premature babies
- Determine the effect of educational intervention on caring skills and coping ability of mothers with premature babies
- Correlate the caring skills and coping abilities of mothers with premature babies

- ❖ Associate the caring skills and coping ability of mothers with selected demographic variables

The present study adopted single pretest posttest design forty respondents were selected by purposive sampling technique. The study is based on Modified Ludwigvon Bertalanffy general system model (1968). The study was conducted for a period of six weeks in KMCH. The tool for data collection are structured self administered questionnaire for assessing the caring skills of mothers with premature babies and CHIPS(coping health inventory for parents) to assessing the coping abilities of mothers with premature babies.

The educational intervention given to the mother by computer. After the seventh day post test and coping ability was assessed through CHIPS. In the post test the entire respondents gained knowledge regarding caring skills of mothers with premature babies. Descriptive and inferential statistics was used in statistical analysis. Karl person's coefficient of correlation was used to find out the correlation between caring skills and coping abilities of mothers with premature babies. Chi –square was used to find out association between background variables with caring skills and coping abilities of mothers with premature babies.

The study tested and accepted that, there is a high positive correlation between caring skills and coping abilities of mothers with premature babies.

MAJOR FINDINGS OF THE STUDY

1. The mean pretest knowledge of the respondents were 12.12
2. The mean posttest knowledge of the respondents were 18
3. The mean coping abilities the respondents were 82.65
4. The't' value is 21.32 for the mean difference in the pretest posttest knowledge score of respondents which is statistically significant at 0.05 level.

CONCLUSION

The following conclusion was drawn from the study.

- ❖ Effectiveness of one to one teaching programme improving the mother's caring skills of premature babies.
- ❖ The study proved that there is a significant difference between pretest and posttest knowledge of caring skills of mothers premature babies.
- ❖ The study proved that the caring skills was positively correlated with their coping score

- ❖ The study proved that there is no association between the caring skills and coping abilities with their selected demographic variables

IMPLICATIONS

Numerous implications can be drawn from the present study for practice which promotes and creates a new dimension to nursing profession and will bring numerical changes in the practical behaviors. The present study results have several implications on nursing practice, nursing education, nursing administration, and nursing research.

Nursing practice

- ❖ Nurses can teach the care of premature babies to mothers whose babies admitted in NICU by using LCD.
- ❖ Motivate the mothers to give better care to their babies.

Nursing education

- ➢ The study helps to provide knowledge in preparing mothers to provide care to the babies.
- ➢ Nurse educators can encourage the students to gain knowledge in care of premature babies.
- ➢ Nurse educator can encourage the students to learn skills in demonstrating care of premature babies in obstetrical and gynaecological wards.
- ➢ Nurse educator can prepare the nurses in motivating the mothers for care of premature babies by means of explanation and demonstration.

Nursing administration

- ➢ Nurse administrator can plan and organize in service education for nursing personnel regarding care of premature babies.
- ➢ Nurse administrator can encourage the nursing personnel to conduct a longitudinal study of caring skills of premature babies.
- ➢ Nurse administrator can organize a video show regarding the caring skills of premature babies.

Nursing research

- ➢ Nurses must develop newer instructional technology towards nursing education and nursing practice on care of premature babies**.**
- ➢ The study gives emphasis to practice evidence based findings.
- ➢ The study lays down a foundation for further research

LIMITATIONS

- Only forty samples were included in the study due to the time constraints.
- The study is limited to who has delivered baby before 37 weeks of gestation.

RECOMMENDATIONS

- A similar study can be conducted for a large group in different areas on a long term basis.
- Similar study can be conducted among other health personnel.
- Similar study can be conducted by using true experimental design.
- Similar study can be conducted by using different teaching strategies.
- A comparative study can be conducted to assess the knowledge and practice in care of premature babies among normal delivery and LSCS mothers

ABSTRACT

The present study entitled **"Effectiveness of educational intervention on knowledge regarding caring skills and coping abilities of mothers with premature babies at KMCH in Coimbatore".** The objectives of the study were as follows, assess caring skills and coping abilities of mothers with premature babies, determine the effect of educational intervention on knowledge regarding caring skills and coping ability of mothers with premature babies, compare the pretest and post test score of caring skills of mothers with premature babies, associate the caring skills and coping ability of mothers with selected demographic variables. The Design of the study was Single group pretest posttest pre experimental design experimental design. The study was conducted at KMCH maternity wards and NICU, Coimbatore**,** the sample size for this study was included 40 mothers with premature babies. Purposive sampling technique was adapted for this study. And the conceptual frameworks for this study were developed by applying Ludwigvon Bertalanffy (1968) general system theory. The outcome measure of this study was knowledge regarding caring skills of mothers were assessed before and after educational intervention through administration of structured questionnaire and the coping abilities of mothers were assessed through modified coping health inventory for parents (MCHIPS) computer assisted teaching was given to the mothers. The results of the study was the mean pretest and posttest knowledge scores of the mothers with premature babies before and after educational intervention were 12.12 and 18.while mean score of coping abilities of the mothers with premature babies were 82.65.In comparison of caring skills and coping abilities, 't' value of caring skills was 21.32 which is significant at 0.05 level. Coefficient of correlation between caring skills and coping ability is 0.76 which shows that there is a high positive correlation between caring skills and coping ability. There is no association between pretest and posttest knowledge score of the respondents on caring skills of mothers with premature babies and their education, occupation, income, type of family. The conclusions of the study were the teaching intervention of the caring skills of premature babies has significantly improved their knowledge and coping abilities.

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APPENDIX-A

SECTION -I

DEMOGRAPHIC PROFILE **Sample No:**

MOTHER

Age :

Education :

Occupation :

Religion :

Monthly Income :

Years of marriage :

Type of family :

BABY:

Sex of the baby :

Weight of the baby :

Mode of delivery :

Gestational Age :

Duration of in NICU :

பகுதி-அ

சுயவிபரம்

மாதிரி எண்:

தாயின் விவரங்கள்

வயது :

கல்வித்தகுதி :

தொழில் :

மதம் :

மாதவருமானம் :

திருமணமாகி எத்தனை வருடங்கள் :

குடும்பவகை :

குழந்தையின் விவரங்கள்

பாலினம் :

எடை :

பிரசவமுறை :

கர்ப்பகால வயது :

மருத்துவமனையில் இருந்த

நாட்களின் எண்ணிக்கை :

SECTION –II

STRUCTURED QUESTIONNAIRIES ON KNOWLEDGE REGARDING CARING SKILLS OF MOTHERS WITH PREMATURE BABIES

Instructions: Read the questions and put the correct answers in the respective boxes

1) When we call a baby as a full term?

a) 8 months ☐

b) 7 months ☐

c) 9 months ☐

d) 10 months ☐

2) What is the average weight of newborn?

a) 2.5 -3.5kg ☐

b) 4-5 kg ☐

c) 1-1.5 kg ☐

d) More than 4kg ☐

3) What is premature baby?

a) Born early in pregnancy before the expected date ☐

b) Born on the expected date ☐

c) Born late in pregnancy after the expected date ☐

d) None of the above ☐

4) What do you mean by low birth weight baby?

a) Birth weight less than 2500 kg ☐

b) Birth weight more than 3000 kg ☐

c) Birth weight less than 3000 kg ☐

d) Birth weight less than 400gm ☐

5) What is the common cause of premature delivery?

a) Intra uterine infection ☐

b) Ante partum hemorrhage ☐

c) Contraceptives ☐

d) Hard work during pregnancy ☐

6) How to prevent premature birth?

a) Regular antenatal checkup &personal hygiene ☐

b) Excessive exercise ☐

c) Stressful travelling ☐

d) Involving in household works ☐

7) Why do premature babies need special care?

a) Unable to adopt to life outside the uterus ☐

b) It is very hot outside ☐

c) They need lot of water ☐

d) They are small ☐

8) Which of the following provides first immunity to the premature babies?

a) Breast milk ☐

b) Colostrums ☐

c) Cow milk ☐

d) Formula milk ☐

9) What is relevant to breastfeeding?

a) It spoils the beauty of the mother ☐

b) It is costly ☐

c) It is easy digestible ☐

d) None of the above ☐

10) Which one is the Ideal best feed to your premature baby?

a) Formula milk ☐

b) Breast milk ☐

c) Cow milk ☐

d) None of the above ☐

11) How many feeds does a premature baby need per day?

a) 15-20 feed/day ☐

b) 8-10 feeds/day ☐

c) 5-6 feeds/day ☐

d) 20-25feeds/day ☐

12) When the mother is unable to feed following caesarean delivery of a premature baby the best feed for the baby will be

a) Expressed breast milk ☐

b) Cow milk ☐

c) Formula milk ☐

d) None of the above ☐

13) How frequently will you breastfeed your preterm baby?

a) 6 hours ☐

b) 3 hours ☐

c) 5 hours ☐

d) 10 hours ☐

14) Which is helpful to produce more breast milk?

a) Kangaroo care ☐

b) Nutrition ☐

c) Medication ☐

d) All of the above ☐

15) Why burping is important after feeding?

a) Baby will sleep well ☐

b) It induce vomiting ☐

c) It kicks out the swallowed air ☐

d) It induce aspiration ☐

16) Why kangaroo care is necessary?

a) To protect the baby from injury ☐

b) To maintain the temperature of the baby ☐

c) To induce cool environment ☐

d) None of the above ☐

17) Which is the most effective way of preventing infection in premature babies?

a) Breastfeeding ☐

b) Hand washing ☐

c) Prophylactic antibiotics ☐

d) All of the above ☐

18) How will you maintain the temperature of the baby?

a) Putting fan ☐

b) Opening the doors and windows ☐

c) Cover the baby with warm towel ☐

d) Wrapping in a wet towel ☐

19) What will happen if you are not changing the diaper?

a) Dermatitis ☐

b) Diaper rash ☐

c) Fever ☐

d) Cough and cold ☐

20) How much weight will the premature baby gain per day?

a) 20-30gm/kg/bodyweight ☐

b) 10-20gm/kg/bodyweight ☐

c) 30-40gm/kg/bodyweight ☐

d) More than 30gm/kg/bodyweight ☐

பகுதி ஆ

தாய்மார்கள் குறைமாதக் குழந்தைகளை கவனிக்கும் முறைகள் பற்றிய அறிவை அறிந்துகொள்ளும் வினாநிரல்

குறிப்பு: கீழ்கண்ட வினாக்களுக்கு சரியான விடையை கீழே கொடுக்கப்பட்டுள்ள கட்டங்களில் குறிக்கவும்

1) நாம் எப்போது ஒரு குழந்தையை நிறைமாதக்குழந்தை என அழைக்கிறோம்?

அ) 8 மாதங்கள் ☐

ஆ) 7 மாதங்கள் ☐

இ) 9 மாதங்கள் ☐

ஈ) 10 மாதங்கள் ☐

2) பிறப்பின் போது குழந்தையின் சராசரி எடை என்ன?

அ) 2.5-3.5 கிலோகிராம் ☐

ஆ) 4-5 கிலோகிராம் ☐

இ) 1-1.5 கிலோகிராம் ☐

ஈ) 4 கிலோகிராமிற்கு மேல் ☐

3) குறைமாதக்குழந்தை என்றால் என்ன?

அ) எதிர்பார்க்கப்பட்ட தேதிக்கு முன்கூட்டியே பிறந்தகுழந்தை ☐

ஆ) எதிர்பார்க்கப்பட்ட தேதியில் பிறந்த குழந்தை ☐

இ) எதிபார்க்கப்பட்ட தேதிக்கு பிறகு பிறந்த குழந்தை ☐

ஈ) இவற்றில் எதுவுமில்லை ☐

4) குறைவான பிறப்பு எடை கொண்ட குழந்தையைப் பற்றி நீங்கள் என்ன நினைக்கிறீர்கள்?

அ) பிறப்பு எடை 2500 கிராமிற்கு குறைவான நிலை ☐

ஆ) பிறப்பு எடை 3000 கிராமிற்கு அதிகமான நிலை ☐

இ) பிறப்பு எடை 3000 கிராமிற்கு குறைவான நிலை ☐

ஈ) பிறப்பு எடை 400 கிராமிற்கு குறைவான நிலை ☐

5) குறை பிரசவம் ஏற்பட பொதுவான காரணம் என்ன?

அ) கர்ப்பபையில் நோய்த்தொற்று ☐

ஆ) கர்ப்பகாலத்தின் போது இரத்தபோக்கு ☐

இ) குடும்பகட்டுப்பாட்டு முறைகள் ☐

ஈ) கர்ப்பகாலத்தில் கடினமான உழைப்பு ☐

6) குறைமாத பிறப்பை எவ்வாறு கட்டுபடுத்தலாம்?

அ) வழக்கமான குழந்தை பிறப்பிற்கு முந்தய பரிசோதனை மற்றும் தனிநபர் சுகாதாரம் ☐

ஆ) அதிகபடியான உடற்பயிற்ச்சிகள் ☐

இ) மனஅழுத்தமான பயணம் ☐

ஈ) வீட்டு வேலைகளில் உடன்படுதல் ☐

7) குறைபிரசவத்தில் பிறந்த குழந்தைகளுக்கு ஏன் சிறப்பு கவனம் தேவை?

அ) அவர்களால் கருப்பைக்கு வெளியே உள்ள வாழ்க்கையை பின்பற்ற முடிவதில்லை ☐

ஆ) வெளியே வெயிலாக உள்ளது ☐

இ) அவர்களுக்கு தண்ணீர் நிறைய வேண்டும் ☐

ஈ) அவர்க்ள் சிறிய அளவில் இருப்பதால் ☐

8) பின்வருவனவற்றில் எந்த முறை குறை பிரசவத்தில் பிறந்த குழந்ததைகளுக்கு நோய் தொற்றிலிருந்து முதல் தடுப்பு முறையை அளிக்கிறது?

அ) தாய்ப்பால் ☐

ஆ) சீம்பால் ☐

இ) பசும்பால் ☐

ஈ) செயற்கைபால் ☐

9) தாய்ப்பால் ஊட்டுதலில் தொடர்புடையது என்ன?

அ) தாயின் அழகை அழித்து விடுகிறது ☐

ஆ) அதிக செலவானது ☐

இ) இது எளிதாக செரிமானம் அடைகிறது. ☐

ஈ) இவற்றில் எதுவுமில்லை ☐

10) குறைமாதக் குழந்தைக்கு ஏற்ற உணவு முறை என்ன?

அ) செயற்கைபால் ☐

ஆ) தாய்ப் பால் ☐

இ) பசும்பால் ☐

ஈ) இவற்றில் எதுவுமில்லை ☐

11) ஒரு நாளைக்கு குழந்தை எத்தனை முறை தாய்ப்பால் எடுக்கும்?

அ) 15-20 முறை ☐

ஆ) 8-10 முறை ☐

இ) 5-6 முறை ☐

ஈ) 20-25 முறை ☐

12) அறுவைசிகிட்சை மூலம் குறைமாதக்குழந்தையை பெற்றெடுத்த தாய்மார்க்ள் குழந்தைக்கு தாய்ப்பால் ஊட்ட முடியாத நிலையில் குழந்தைக்கு கிடைக்கும் சிறந்த உணவு

அ) வெளியேற்றப்ப்ட்ட தாய்ப்பால் ☐

ஆ) பசும்பால் ☐

இ) செயற்கைபால் ☐

ஈ) இவற்றில் எதுவுமில்லை ☐

13) உங்கள் குறை மாதக்குழந்தைக்கு எத்தனை மணிநேரத்திற்கு ஒருமுறை நீங்கள் தாய்ப்பால் ஊட்டுவீர்கள்?

அ) 6 மணிநேரம் ☐

ஆ) 3மணிநேரம் ☐

இ) 5மணிநேரம் ☐

ஈ) 10மணிநேரம் ☐

14) கீழ்கண்டவற்றில் எந்த முறை தாய்ப்பால் சுரக்க பயனுள்ளதாக இருக்கும்?

அ) கங்காரு பாதுகாப்பு முறை ☐

ஆ) வைட்டமின்கள் ☐

இ) மருந்துகள் ☐

ஈ) மேலேயுள்ள அனைத்தும் ☐

15) உணவு கொடுத்தபிறகு குழந்தையின் முதுகில் தட்டிக்கொடுப்பது ஏன் முக்கியமானது?

அ) குழந்தை நன்றாக தூங்குவதற்கு உதவும் ☐

ஆ) குழந்தை வாந்தி எடுப்பதற்கு தூண்டும் ☐

இ) பால் குடிக்கும் போது விழுங்கிய காற்றை வெளியே எடுப்பதற்கு உதவும் ☐

ஈ) புரை ஏறுவதை தூண்டுகிறது ☐

16) ஏன் கங்காரு பாதுகாப்பு முறை அவசியம்?

அ) இது குழந்தையை காயதிலிருந்து பாதுகாக்கிறது ☐

ஆ) குழந்தையின் வெப்பநிலையை பராமரிக்க உதவுகிறது ☐

இ) குளிரான சூழலை தூண்டுகிறது. ☐

ஈ) இவற்றில் எதுவுமில்லை ☐

17) குறைமாதக் குழந்தைகளை தொற்று நோயிலிருந்து தடுக்க மிகவும் பயனுள்ள வழி எது?

அ) தாய்ப்பால் புகட்டுவது ☐

ஆ) கைக்கழுவுதல் ☐

இ) முற்க்காப்புக் கொல்லிகள் ☐

ஈ) மேலேயுள்ள அனைத்தும் ☐

18) குழந்தையின் உடல் வெப்பநிலையை எவ்வாறு பராமரிக்க வேண்டும்?

அ) மின் விசிறியை போடுவது ☐

ஆ) கதவு மற்றும் சன்னல்களை திறந்துவைப்பது ☐

இ) குழந்தையை உலர்ந்த துணியில் சுற்றி பராமரிப்பது ☐

ஈ) ஈரமான துண்டு வைத்து குழந்தையை போர்த்திக்கொள்வது ☐

19) குழந்தையின் டயப்பரை நீங்கள் அடிக்கடி மாற்றவில்லை என்றால் என்ன நேரிடும்?

அ) ஒவ்வாமை ☐

ஆ) டயப்பர் அரிப்பு ☐

இ) காய்ச்சல் ☐

ஈ) இருமல் மற்றும் சளி ☐

20) ஒரு நாளைக்கு குறைமாதக் குழந்தை எவ்வளவு எடை அதிகமாகிறது?

அ) 20-30 கிராம் /கிகி/ உடல் எடை ☐

ஆ) 10-20 கிராம் /கிகி/ உடல் எடை ☐

இ) 30-40 கிராம் /கிகி/ உடல் எடை ☐

ஈ) 30 கிராம்/கிகி/உடல் எடைக்கு அதிகமாக ☐

SECTION -III

COPING HEALTH INVENTORY FOR PARENTS

MAINAINING FAMILYINTEGRATION, COOPERATION, AND AN OPTIMISTIC DEFINITION OF A SITUATION

S.No	Subscales for factor analysis	Extremely helpful	Moderately helpful	Minimally helpful	Not helpful
1.	Believing that my child will get better				
2.	Doing things with my children				
3.	Building a closer relationship with my spouse				
4.	Doing things with family relatives				
5.	Believing that my child is getting the best medical care possible				
6.	Doing things related to my child together as a family(involving all members of the family)				
7.	Providing food to my baby interms of breast milk				
8.	Purchasing gift myself and/or other family members				
9.	Providing KMC to my baby at times when I am not in work at home				
10.	Talking to someone(not professional counselor/doctor)about how I feel				
11.	Building close relationship with people				
12.	Talking with other parents in the same type of situation and learning about their experiences				

13.	Reading more about the medical problem which concerns me				
14.	Being sure prescribed medical treatments for children are carried out at home on a daily basis.				
15.	Talking with other individuals /parents in my same situation				
16.	Talking with the doctor about my concerns about my children with the medical condition				

COPING HEALTH INVENTRY FOR PARENTS

MAINTAINING SOCIAL SUPPORT, SELF ESTEEM, ANDPSYCHOLOGICAL STABILITY

S.No	Subscales for factor analysis	Extremely helpful	Moderately helpful	Minimally helpful	Not helpful
1.	Investing myself in my children				
2.	Believing that things will always work out				
3.	Talking over personal feelings and concerns with spouse				
4.	Believing in god				
5.	Trying to maintain family stability				
6.	Trusting my spouse to help support me and my children				
7.	Having my child with the medical condition seen at the clinical hospital on a regular basis				
8.	Encouraging children with medical condition to be more independent				
9.	Preparing myself to meet any situation				
10.	Sleeping				
11.	Concentrating on hobbies (art, music etc...)				
12.	Becoming more self reliant and well groomed				
13.	Engaging in relationships and friendships which help to feel important and appreciated				
14.	Entertaining friends in our home				
15.	Investing time and energy in my job				
16.	Developing myself as important in my chils health care				

17.	Talking with the medical staff (nurse's social workers etc...)when we visit the medical center				
18.	Explaining our family situation to friends and neighbors so they will understand				

COPING HEALTH INVENTORY FOR PARENTS

UNDERSTANDING THE MEDICAL SITUATION THROUGH COMMUNICATION WITH OTHER PARENTS AND CONSULTATION WITH MEDICAL STAFF

S.No	Subscales for factor analysis	Extremely helpful	Moderately helpful	Minimally helpful	Not helpful
1.	Telling myself that I have many things I should be thankful for				
2.	Taking good care of all the medical equipment at home				
3.	Showing that I am strong				
4.	Involvement in social activities with friends				
5.	Allowing myself to get angry				
6.	Keeping myself in shape and well groomed				
7.	Going out with my spouse on a regular basis				
8.	Reading about how other persons' in my situation handle things				

பகுதி இ

தாய்மார்கள் குறைமாதத்தில் பிறந்த குழந்தைகளை திறம்படக் கவனிப்பதை அறியும் வினாப்பட்டியல்

குடும்ப ஒருங்கிணைப்பை பராமரித்தல் மற்றும் தாயின் நம்பிக்கை நிலையை அறிதல்

எண்	காரணிப்பகுப்பாய்வு	மிகவும் பயனுள்ளதாக	மிதமான பயனுள்ளதாக	பயனுள்ளதாக	பயனுள்ளதாக இல்லை
1.	என் குழந்தைக்கு நலமாகும் என்ற நம்பிக்கை.				
2.	என் குழந்தைக்கான வேலைகளை செய்வேன்.				
3.	என் துணைவருடன் நெருக்கமான உறவை வளர்த்தல்				
4.	குடும்ப உறவினர்களுடன் செயல் புரிவேன்.				
5.	கூடிய அளவு சிறந்த மருத்துவ பராமரிப்பு என் பிள்ளைக்கு கிடைக்கிறது என நம்புகிறேன்.				
6.	என் குழந்தையின் உடல் நல முன்னேற்றத்திற்க்காக குடும்ப உறுப்பினர்களுடன் சேர்ந்து செயல்புரிவேன்.				
7.	என் குழந்தைக்கு தேவையான உணவை தாய்பாலின் மூலமாக கொடுப்பேன்.				
8.	எனக்கும் என் குடும்பத்தினருக்கும் வெகுமதிகள் வாங்கிக்கொடுப்பேன்.				

9.	வீட்டுவேலைகளை செய்யும் நேரத்தை தவிர மற்ற நேரங்களில் கங்காரு பாதுகாப்பு முறையின் மூலம் என் குழந்தைக்கு பாதுகாப்பை கொடுப்பேன்.				
10.	என் குழந்தையை பற்றிய என் உணர்வுகளை மற்றவர்களோடு பகிர்ந்து கொள்வேன்.				
11.	என்னை போன்ற நிலையில் இருக்கும் மற்ற பெற்றோர்களிடம் ஒரு நெருக்கமான உறவை ஏற்படுத்திக்கொள்வேன்.				
12	என்னை போன்ற நிலையில் இருக்கும் மற்ற பெற்றோர்களிடம் தொடர்பு வைத்துக் கொண்டு அவர்களது அனுபவத்திலிருந்து கற்றுக் கொள்வேன்.				
13.	மருத்துவ பிரச்சனைகளைக் குறித்த புத்தகங்களைப் படிப்பேன்.				
14.	குழந்தைக்கு தினசரி கொடுக்கப்பட்டுள்ள மருத்துவ சிகிட்சைகளை வீட்டில் நிறைவேற்றுவேன்.				
15.	என் போன்ற நிலையில் இருக்கும் பெற்றோர்கள்/ தனிநபர்களோடு பேசுவேன்.				
16.	என் குழந்தையின் மருத்துவ நிலை குறித்து மருத்துவரோடு பேசுவேன்.				

தாய்மார்கள் குறைமாதத்தில் பிறந்த குழந்தைகளை திறம்படக் கவனிப்பதை அறியும் வினாப்பட்டியல்

தாய்மார்களின் சமூகபலம் மற்றும் மன உறுதியை பற்றி அறிந்து கொள்ளுதல்

எண்	காரணிப்பகுப்பாய்வு	மிகவும் பயனுள்ளதாக	மிதமான பயனுள்ளதாக	பயனுள்ளதாக	பயனுள்ளதாக இல்லை
1.	என் குழந்தைக்காக என்னை அர்ப்பணிப்பேன்				
2.	எல்லாம் நன்மையாகவே முடியும் என்று நம்புவேன்				
3.	குழந்தையை பற்றிய என் உணர்வுகளையும் கருத்துக்களையும் என் கணவரிடம் பகிர்ந்து கொள்வேன்				
4.	கடவுளிடம் நம்பிக்கை				
5.	குடும்ப சம நிலையை பாதுகாப்பேன்				
6.	எனக்கும் என் குழந்தைக்கும் என் கணவர் உறுதுணையாக இருக்கிறார் என நம்புகிறேன்				
7.	மருத்துவபிரச்சனையோடு இருக்கும் என் குழந்தையை ஒழுங்காக சென்றுபார்ப்பேன்				
8.	நான் மருத்துவமனைக்கு செல்லும் போது குழந்தையின் சரீர தேவைகள் மற்றும் அதன் பராமரிப்பைப் மேற்கொள்வேன்				
9.	எந்த சூழ்நிலையிலும் மனம் தளராமல் இருக்க என்னை தயார் செய்து கொள்ளுவேன்				
10.	ஒய்வு எடுத்துக்கொள்வேன்				
11.	சிறிது நேரத்தை பொழுதுபோக்குகளிலும் இசை கேட்பதிலும் செலவிடுவேன்				
12.	நான் என்னை பராமரிப்பதோடு கூட தன்னிச்சையாகவும் நடந்து கொள்வேன்				

13.	குழந்தை நலனில் என் முக்கியத்துவத்தை நான் உணரும் படி என்னை பாராட்டி மற்றும் ஊக்குவிக்கும் நண்பர்கள் மற்றும் உறவினர்களுடன் உறவை வைத்துக் கொள்ளுவேன்				
14.	வீட்டில் இருக்கும் நண்பர்களை மகிழ்விப்பேன்				
15.	குழந்தையின் உடல்நல முன்னேற்றத்திற்க்காக என் நேரத்தை செலவழிப்பேன்				
16.	குழந்தையின் மீது முக்கியத்துவம் உள்ளவளாக என்னை நானே மாற்றிக்கொள்ளுவேன்				
17.	மருத்துவ மையத்திற்கு செல்லும் போது மருத்துவ பணியாளர்களுடன் பேசுவேன்				
18.	நண்பர்கள் மற்றும் அண்டைவீட்டார் புரிந்துகொள்ளும் வண்ணம் என் குழந்தையின் நிலை பற்றிக் கூறுவேன்				

தாய்மார்கள் குறைமாதத்தில் பிறந்த குழந்தைகளை திறம்படக் கவனிப்பதை அறியும் வினாப்பட்டியல்

மருத்துவநிலை குறித்து மற்ற பொற்றோர்களுடன் தொடர்பு கொண்டும், மருத்துவ பணியாளர்களுடன் ஆலோசித்தும் அறிந்து கொள்ளுதல்

எண்	காரணிப்பகுப்பாய்வு	மிகவும் பயனுள்ளதாக	மிதமான பயனுள்ளதாக	பயனுள்ளதாக	பயனுள்ளதாக இல்லை
1.	நான் நன்றி உள்ளவளாக இருக்க நிறைய காரியங்கள் உள்ளது என்பதை எனக்கு நானே உணர்த்திக் கொள்வேன				
2.	வீட்டில் உள்ள அனைத்து மருத்துவ கருவிகள் குறித்து நல்ல அக்கறை எடுத்துக் கொள்வேன்				
3.	நான் மனவலிமையுடன் இருப்பதை உணர்த்துவேன்				
4.	சமூக செயல்பாடுகளில் என் நண்பர்களுடன் பங்கேற்பேன்				
5.	எனக்கு கோபம் வரும் போது கோபப்படும்படி விட்டுவிடுவேன்				
6.	என் உடல் தோற்றத்தில் கவனம் செலுத்துவேன்				
7.	என் கணவருடன் வழக்கமாக வெளியே செல்லுவேன்				
8.	என் போன்ற நிலையில் இருக்கும் பெற்றோர்கள் / தனிநபர்களோடு பேசுவேன்				

APPENDIX-B

SECTION – D

CARE OF PREMATURE BABIES

INTRODUCTION

A preterm infant is any infant born before the end of 37 completed week's gestation. The causes of preterm labor are poorly understood, but more and more of the factors that influence preterm labor and birth are being identified. With the help of modern technology, some babies fewer than 500g and between 23 and 26 weeks gestation are surviving. But mortality rates are the highest among these newborns.

CLASSIFICATION

Classification according to size

Low birth weight (LBW) infant:

An infant whose birth weight is less than 2500g, regardless of gestational age.

Extremely low birth weight (ELBW) infant:

Neonates weighing less than 1000g at birth irrespective of the gestational age.

Very low birth weight (VLBW) infant:

Neonates weighing less than 1500g at birth irrespective of the gestational age

PHYSIOLOGIC CONSIDERATIONS

The major problem of the preterm newborn is variable immaturity of all systems. The degree of immaturity depends on the length of gestation. For example newborns of 32 weeks of gestation can be expected to exhibit more immaturity than newborns of 36 weeks gestation. "Catch up care" is usually not possible if ground is lost in initial management. Improper physiologic management adds stress and feeds the vicious cycle of physiologic deterioration.

RESPIRATORY AND CARDIAC PHYSIOLOGY AND CONSIDERATIONS

Note: oxygen is the very important gas needed for normal body function when it is not adequately supplied, it compromise the fetal survival.

The preterm newborns lungs are not fully mature and ready to take over the process of oxygen and carbon dioxide exchange without assistance until 37-38 weeks gestation.

Critical factors in the development of respiratory distress include the following

1. The preterm infant's inability to produce adequate amount of surfactant. When surfactant is decreased, ability of the lung to fill with air easily is also lessened. The collapsed alveoli will not facilitate an exchange of oxygen and carbon dioxide resulting in hypoxia, and depletion of the preterm newborns available energy.

Respiratory support

The baby is given respiratory support in terms of

- Oxygen administration
- Continuous positive airway pressure
- Mechanical ventilation

Positioning the infant

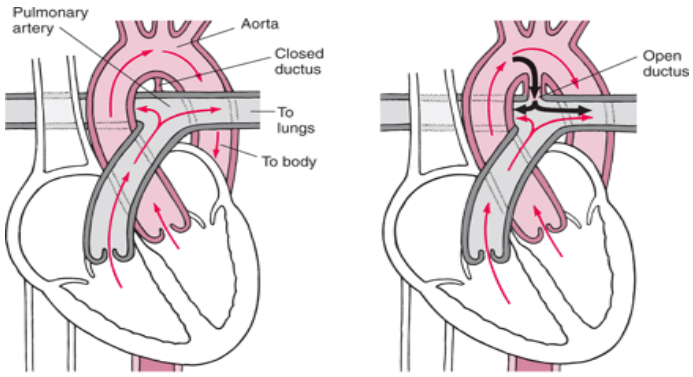
Frequent position changes help drain air passages and prevent stasis of secretions. The side lying and prone positions facilitate drainage of respiratory secretions and regurgitated feedings. The prone and side lying positions are not recommended for normal newborn infants because they are associated with an increased incidence of sudden infant death syndrome. In the

preterm infant, the prone positions increases oxygenation and enhance respiratory control, improve lung mechanics and volume, and reduce energy expenditure. So the mother should know about prone position and side lying position.

- The mother should consider respiratory function during feeding to prevent aspiration.
- If the baby is having cyanosis, tachypnea, inadequate breath sounds and chest retractions immediately admit the baby to the hospital

Fetal circulation

As for as the baby is in your womb the baby would not be in need of the function of its lungs, as its oxygenation is done in placenta.



2. The ductus arteriosus usually responds to rising oxygen levels by vasoconstriction, in the preterm infant, who has higher susceptibility to hypoxia, the ducts may remain open. A patent ducts increases the blood volume to the lungs, causing pulmonary congestion, increased respiratory effort and higher oxygen use.

THERMOREGULATION AND CONSIDERATION

Maintaining a normal temperature in the preterm infant is a real challenge. Heat loss is a major problem that a mother can do much to prevent. Two limiting factors is heat production, however, are the availability of glycogen in the liver (glycogen stores are primarily laid down during the third trimester) and the amount of brown fat available for metabolism (the preterm infant does not have a full supply of brown fat). If the baby is chilled after birth both glycogen and brown fat stores are metabolized rapidly for heat production, leaving the newborn with no

reserves in the event of future stress. Since the muscle mass is small in preterm infants, the muscular activity is diminished (they are unable to shiver), little heat is produced.

Heat loss occurs as a result of several physiologic and anatomic factors

- The preterm baby has a much larger ratio of baby surface to body weight. This means that the baby's ability to produce heat (body weight) is much less than the potential for losing heat (surface area). The loss of heat in a preterm infant weighing 1500g is five times greater per unit of body weight than in an adult.
- The preterm baby has very little subcutaneous fat, which is the human body's insulation. Without adequate insulation, heat is easily conducted from the core of the body (warmer temperature) to the surface of the body (cooler temperature).heat is lost from the body as the blood vessels which lie close to the skin surface in the preterm infants transport blood from the body core to the subcutaneous tissue.
- The posture of the preterm baby is another important factor influencing heat loss. Flexion of the extremities decreases the amount of surface area, exposed to the environment, extension increases the surface area exposed to the environment and thus increases heat loss. The gestational age of the infant influences the amount of flexion from completely hypotonic and extended at 28 weeks to strong flexion displayed by 36 weeks.
- The preterm has a decreased ability to vasoconstrictor superficial blood vessels and conserve heat in the Body core
- The more preterm a baby the less able to maintain heat balance, prevention of heat loss by providing a neutral thermal environment is one of the most important

considerations in the management of the preterm infant, cold stress, with its accompanying severe complications, can be prevented.

Thermoregulatory Support

Preparation of infants for moving to an open crib should begin early. When they are stable, infant can be dressed in a shirt, diaper, and hat while in the incubator. Clothing conserves heat and helps infants adjust to a different temperature on the face than the rest of the body.

- When infants are ready for transfer to an open crib they should be double wrapped with warm blankets at first to help insulate body heat. The temperature is assessed at gradually increasing intervals until the infant is on a routine schedule.
- Mother should observe infants carefully during the first few days after transfer to an open crib
- Avoid placing the baby on cold surfaces.
- Keep the skin dry and place a cap on the baby's head to prevent heat loss

DIGESTIVE PHYSIOLOGY AND CONSIDERATIONS

The basic structure of the gastrointestinal tract is formed early in gestation, so even the very preterm newborn is able to take in some nourishment. Maturation of the digestive and absorptive process is more variable, however and occurs later in gestation.

As a result of GI immaturity, the preterm newborn has the digestive and absorption problems listed below

Limited ability exists to convert certain essential amino acids to non essential amino acids. Certain amino acid such as histamine, turbine and cysteine are essential to the preterm infant but not to the term infant.

Kidney immaturity causes an inability to handle the increased osmolarity of formula protein. Preterm requires a higher concentration of whey protein than casein.

Lactose digestion may not be fully functional during the first few days of a preterm's life. The preterm newborn can digest and absorb most simple sugars.

Deficiency of calcium and phosphorus may exist since two thirds of these minerals are deposited in the last trimester. As a result the preterm infant is prone to rickets and significant bone demineralization.

Feeding intolerance and possible necrotizing enterocolitis may occur if prolonged hypoxia was present at birth.

GI Support

Mother should breastfed the baby and should know the importance of breastfeeding.

RENAL PHYSIOLOGY AND CONSIDERATIONS:

The kidneys of the preterm infant are immature in comparison with those of the full term infant.

Specific characteristics of the preterm infant include the following

The preterm infant's kidneys are limited in their ability to concentrate urine or to excrete excess amounts of fluid. This means that if excess fluid is administered the infant is at risk for fluid retention and over hydration if too little is administered; the infant will become dehydrated because of the inability to retain adequate fluid.

The kidneys of the preterm infant will begin excreting glucose (glycosuria) at a lower serum glucose level than occurs in the adult. Therefore glycosuria with hyperglycemia is common.

The immaturity of the renal system affects the infants ability to excrete drugs.because excretion time is longer, many drugs are given over longer intervals in the preterm infants.(that is every 12 hours instead of every 8 hours).

Renal Support

Mother should know the infant's frequency of urination

MANAGEMENT OF NUTRITION AND FLUID REQUIREMENT

Providing adequate nutrition and fluids for the preterm infant is a major challenge of the mother, early feedings are extremely valuable in maintaining normal metabolism and lowering the possibility of such complications as hypoglycemia, hyperbilirubinemia, hyperkalemia, and azotemia. However, the preterm infant is at risk for complications that may develop because of immaturity of the digestive system.

Nutritional requirements

Oral caloric intake for growth in an uncompromised healthy preterm newborn is 120-150 kcal/kg/day. In addition to these relatively high caloric needs the preterm requires more protein (3-4g/kg/day, as opposed to 2.0 to 2.5 g/kg/day for the full term infant).to meet these needs, a number of higher calorie, higher protein formulas are available that meet the preterm infants nutritional demands yet do not overtax the concentration abilities of the immature kidneys. In many instances it is necessary to supplement the oral feedings with parentral fluids to maintain adequate hydration and caloric intake.

In addition to a higher calorie and protein formula it is recommended that preterm infants receive supplemental multivitamins and vitamin E. the requirement for vitamin E is increased by a diet high in poly saturated fats (which are tolerated best by preterm infants).preterm infants fed iron fortified formulas have higher red cell hemolysis and lower vitamin E concentrations and thus require additional vitamin E. vitamin E supplements decrease susceptibility to hemolytic anemia. Serum levels of vitamin E should be monitored if large amount of oral supplements are used. The preterm newborn also needs calcium and vitamin D supplements to increase mineralization of bones.

Types of feeding for preterm newborns

The formula of choice for feeding the preterm infant varies somewhat among institutions and areas of the country. Most preterm formulas contain protein with a whey/ casein ratio of 60/40 (a similar proportion to that found in breast milk) and a caloric value of 24 calories per ounce. Initial feeding may be diluted to 12 calories per ounce and gradually increased, as the infants tolerate them, to 24 calorie formulas. Breast milk is widely used to feed preterm infants. Besides its many benefit for the infants the mother contributes to the infant’s wellbeing. Mother

should aware of the advantages and possible disadvantages of breastfeeding such as decreased growth rate, hyponatremia, lactose intolerance, and rickets if breast milk is the sole source of food.

Methods of Feeding

The preterm infant is fed by various methods depending on the infant's gestational age, health and physical condition, and neurologic status. The most common oral feeding methods are nipple, breast and gavage feeding.

Breast Feeding

Mothers who wish to breastfeed their preterm infants should be give the opportunity to put the infant to breast as soon as the infant has demonstrated a coordinated suck and swallow reflex, is showing consistent weight gain, and can control body temperature outside of the isolate, regardless of weight.

Human milk is the first choice enteral feed for all LBW babies. In an amount of 180 ml (150-200ml) per kg per day, it meets the water requirements of LBW infants. This provides the mean recommended energy intake of 130 cal/ kg/day. The protein content of breast milk is generally adequate. This intake of 2.25 g/kg/day as recommended could be achieved by 180ml/kg/day. It has been observed that moderately LBW (>1500g) thrive and achieve intrauterine weight gain without signs of metabolic stress on such intake.

Expressed Breast Milk

If a mother is not in a position to feed her baby (eg.ill mother, preterm baby, and working mother) she should express her milk in a clean wide mouthed container and this milk should be fed to her baby. Expressed breast milk can be stored at room temperature for 6-8 hours, in a refrigerator for 24 hours and a freezer at 20^0C for 3 months.

Method of Milk Expression

Ask the mother to wash her hands thoroughly with soap every time before her expresses. Make her comfortable. Gently massage the breast. Hold the container under her under nipple and areola. Place her thumb on top of the breast at least 4 cm from the tip of the nipple, and the first finger on the underside of the breast opposite the thumb. Compress and release the breast tissue

between her fingers and thumb a few times. If the milk does not appear should reposition her thumb and finger closer to the nipple and compress and release the breast as before. Compress and release all the way around the breast, keeping her fingers the same distance from the nipple. Express one breast until the flow of milk slows and milk only drips out, and then express the other breast until the milk only drips. Alternate between breasts 5 or 6 times, for at least 20-30 minutes. Stop expressing when the milk no longer flows drips from the start.

Expressing breast milk

"***Katori" Spoon Feeds***

Feeding with a spoon (or a similar device such as "paladai" and katori (or any other receptacle such as cup) has been found to be safe in LBW babies. This mode of feeding is a bridge between gavage feeding and direct breast feeding. It is based on the premise that neonates with gestation of 30-32 weeks or more are in a position to swallow the feeds satisfactorily even though they may not be good at sucking or coordinating it with swallowing. Use of a medium sized "katori"and a small (1-3 ml size) spoon. Both utensils must be washed and cleaned. Take the required amount of expressed breast milk in the katori. Place the baby in an upright posture with a napkin around the neck to mop up the spillage.

Fill the spoon with milk, a little short of the brim, place it at the lips of the baby in the corner of the mouth and let the milk flow into the baby's mouth slowly avoiding the spill. The baby will actively swallow the milk. Repeat the process till the required amount has been fed.

Gavage or tube feeding

The gavage feeding method is used with preterm infants (less than 24 weeks gestation) who lack or have a poorly coordinated suck and swallow reflex or are ill. Gavage feeding may be used as an adjunct to nipple feeding if the infant tires easily, or as an alternative if an infant is losing weight because of the energy expenditure required for nippling.

Amount and schedule of feeding

The amount of feeds is not only dependent on the physiological needs but also on the readiness of the baby to tolerate it. This requirement in small babies is met by a mix of intravenous fluid and enteral feeds. If babies can tolerate enteral feed adequately the usual amount given on day one is 60-80 ml/kg. This is augmented every day by about 15ml to reach a volume of 180-200 ml/kg/day by 7^{th} to 10^{th} day. First feed in LBW infants is provided at 2 hours of age. Later feeds are provided 2-3 hourly.

Judging adequacy of nutrition

The key measure of optimal feeding is the weight pattern of the baby. A LBW baby loses up to 1 to 2 % weight every day amounting to 10-15% cumulative weight loss during the first week of life. Birth weight is regained between 10-14^{th} day, all babies start gaining weight by the second week of life at a rate of about15-20 g/day. Daily weighing of low birth weight babies is required when they are in the hospital. Later, it is desirable to weigh all LBW babies at the age of 2 weeks (to check regaining of the birth weight), 4 weeks (to ascertain a weight gain of at least

200-300g) and then every month. Excessive weight loss or inadequate weight gain indicate inadequate feeding.

Feeding Problems

Which ever method of feeding is selected for an infant the mother should carefully watch for any signs of feeding intolerance including the following

- Occult Decreased gastric residuals
- Abdominal distension
- blood in stools
- Vomiting
- Diarrhea

Because of general immaturity the preterm infant is susceptible to the following problems

Marked danger of aspiration and its associated complications because of the infants poorly developed gag reflex, incompetent esophageal cardiac sphincter, and poor sucking and swallowing reflex.

1. Small stomach capacity which limits the amount of fluid that can be introduced to meet the infant's high calorie needs.
2. Decreased absorption of essential nutrients because of immaturity, mal absorption and nutritional loss associated with vomiting and diarrhea.
3. Fatigue associated with sucking, which may lead to increased basal metabolic rate, increased oxygen requirements and possible necrotizing enterocolitis.
4. Feeding intolerance and NEC due to diminished blood flow to the intestinal tract because of shock or prolonged hypoxia at birth.

Provision of adequate nutrition and prevention fatigue during feeding

The first feedings are small amounts given every 2-3 hours. These small amounts are increased slowly by 1-2 ml. formula or breast milk is incorporated into the feedings slowly. Initially it may be at quarter strength, then half strength, and so on. This is done to avoid over taxing the digestive capacity of the preterm infant.

The feeding method depends on the feeding abilities and health status of the preterm newborn. Both nipple and gavage methods are initially supplemented with intravenous therapy until oral intake is sufficient to support growth. Growth usually occurs when 120-159 kcal/kg days are provided, and this prevents metabolic catabolism and hypoglycaemia. Growth is evaluated by an increase in weight, length, and body measurements. The mother should be watchful any signs of respiratory distress or fatigue during feedings.

The mother establishes a nipple feeding program that is begun and progresses slowly, such as one nipple feeding per day ,then one nipple feeding per shift, and then a nipple feeding every other feedings. Daily weights are monitored because often there is a small weight loss when nipple feedings are started. After feedings the baby is placed on the right side (with support maintain this position) or on the abdomen. These positions enhance gastric emptying and decrease the chance of aspiration if regurgitation occurs. Gastro esophageal reflux is not uncommon I preterm newborns.

The nurse involves the parents in feeding their preterm baby. This is essential to the development of attachment between parents and infant. In addition such involvement increases parental knowledge about the care of their infant and helps them cope with the situation

KANGAROO MOTHER CARE

Kangaroo mother care (KMC) is care of preterm or low birth weight infants carried skin-to-skin with the mother.KMC was initially conceived as an alternative to warmer care for stable low birth weight infants.KMC has now become standard of care either as an alternative to or an adjunct to technology based care.

Components of KMC

Kangaroo position

The kangaroo position consists of skin-to-skin contact between the mother and her infant in a vertical position, between the mother's breasts and under her cloths.It can be of two types depending upon the duration: continuous or intermittent. The continuous modality is usually employed as an alternative to minimal care in an incubator for infants who have already overcome major problems while adopting to extra uterine life, are able to suck and swallow properly and are thriving in natural thermal environment. The kangaroo position should be

maintained as long as possible, ideally 24 hrs/day. The provider must be in a semi reclining position to avoid reflux in the infants.

When continuous care is not possible, the kangaroo position can be used intermittently, providing the proven emotional and breastfeeding promotion benefits. The kangaroo position must be offered for as long as possible (1-2 hrs at least in a sitting). This 1-2 hrs span is important as it provides the stimulation that the mother needs to increase the milk volume and facilitate milk letdown. This is initiated in the hospital and continued at home.

Benefits of KMC

Physiological Benefits

Heart and respiratory rates, respiration, oxygenation, oxygen consumption, blood glucose, sleep patterns and behavior observed in preterm/low birth weight infants held skin-to skin tend to be similar to or better than those observed in infants separated from their mothers.

Clinical Benefits

- KMC significantly increases milk production in mothers.
- KMC increases the exclusive breastfeeding rates.

- KMC reduces the incidence of respiratory tract and nosocomial infections.
- There is improved weight gain
- It improves thermal protection in these infants and there is a reduced chance of hypothermia.
- It improves emotional bonding between the Infant and mothers.
- KMC reduces duration of hospital stay.

Criteria for Eligibility of KMC

BABY

KMC is indicating in all stable LBW babies. However, very sick babies needing special care should be cared for under radiant warmer initially.KMC should be started after the baby is hemodynamically stable. Short KMC sessions can be initiated during recovery with ongoing medical treatment.KMC can be provided while the baby is being fed via orogastric tube or an oxygen therapy.

Guidelines for practicing KMC include

Birth weight >1800g:

These babies are generally stable at birth. Therefore, in most of them KMC can be initiated soon after birth.

Birth weight 1200-1799g:

Many babies of this group have significant problems in neonatal period. It might take a few days before KMC can be initiated.

Birth weight <1200g

Frequently these babies develop serious prematurity related morbidity, often starting soon after birth. It may take days to weeks before baby's condition allows initiation of KMC.

MOTHER

All mothers can provide KMC, irrespective of age, parity, education, culture and religion. The mother must be willing to provide KMC. The mother should be free from serious illness to

be able to provide KMC. She should receive adequate diet and supplements recommended by her physician. She should maintain good hygiene. Mother would need family's cooperation to deal wither conventional responsibilities of household chores till the baby requires KMC

Initiation of KMC

Counseling

When baby is ready for KMC, arrange a time that is convenient to the mother and her baby. Demonstrate to her the KMC procedure in a caring gentle manner and its patience. Answer her queries and allay her anxieties. Encourage the mother to bring her mother/mother in law, husband, or any other member of the family. It helps in building positive attitude of the family and ensuring family support to the mother who is particularly crucial for post discharge home based KMC. It is helpful that the mother starting KMC interacts with someone already practicing KMC for her baby.

Mother's Clothing

KMC can be provided using any front open, light dress as per the local culture.KMC works well with blouse and sari, gown or shawl. Suitable apparel that can retain the baby for extended period of time can be adopted locally.

Baby's clothing

Baby is dressed with cap, socks, nappy, and front open sleeveless shirt.

KMC Procedure

Kangaroo Positioning

The baby should be placed between the mother's breasts in an upright position. The head should be turned to one side and in a slightly extended position. This slightly extended head position keeps the airway open and allows eye to eye contact between the mother and her baby. The hips should be flexed and abducted in a "frog" position; the arms should also be flexed. Baby's abdomen should be at the level of the mother's epigastrium. Mother's breathing stimulates the baby, thus reducing the occurrence of apnea. Support the baby's bottom with a sling/binder

Monitoring

Babies receiving KMC should be monitored carefully, especially during the initial stages. Mother should make sure that baby's neck position is neither too flexed nor too extended, airway is clear, breathing is regular, color is pink and baby is maintaining temperature. Mother should be involved in observing the baby during KMC so that she herself can continue monitoring at home.

Feeding

The mother should be explained how to breastfeed while the baby is in KMC position. Holding the baby near the breast stimulates milk production. Mother may express milk while the baby is still in KMC position. The baby could be fed with paladai, spoon, or tube, depending on the condition of the baby.

Privacy

KMC unavoidably requires some exposure on the part of the mother. This can make her nervous and could be de motivating. The staff must respect mother's sensitivities in this regard and ensure culturally acceptable privacy standards in where the KMC is practiced.

Duration

Skin to skin contact should start gradually in the nursery, with a smooth transition from conventional care to continuous KMC. Sessions that last less than one hour should be avoided because frequent handling may be stressful for the baby. The length of skin to skin contact should be gradually increased up to 24 hours a day, interrupted only for changing diaper. The mother can sleep with baby in kangaroo position in reclined or semi recumbent position about 15 degrees from horizontal. This can be done with an adjustable bed or pillow on an ordinary bed. A comfortable chair with an adjustable back may be used for resting during the day.

When to Stop KMC:

KMC is continued till the baby finds it comfortable and cosy.KMC is unnecessary once the baby attains a weight of 2500 g and a gestation of 37 weeks. A baby who, upon being put in

the kangaroo position, tends to wriggle out, pulls limbs out, or cries/fusses is not in need of KMC anymore.

PREVENTION OF INFECTION

Mother is responsible for minimizing the preterm newborns exposure to pathogenic organisms. The preterm newborn is susceptible to infection because of an immature immune system and thin and permeable skin. Invasive procedures, techniques such as umbilical catheterization and mechanical ventilation, and prolonged hospitalization place the infant at greater risk for infection.

Strict hand washing, reverse isolation, and use of equipment for only one infant help minimize exposure of the preterm newborn to infectious agents.

Exposure to family members who have contagious diseases should be prevented.

COMMON COMPLICATIONS OF PREMATURITY

The preterm new born is at risk for many complications secondary to the immaturity of various body systems in addition to those already discussed. The most common of these complications are described here.

- Apnea
- Respiratory distress syndrome
- Intraventricular haemorrhage
- Hypocalcaemia
- Hypoglycemia
- Necrotizing enter colitis
- Anemia
- Hyperbilirubinemia
- Infection

SUMMARY

Till now we will discussed about caring skills of premature babies physiological considerations in each systems, feeding methods , kangaroo mother care and infection control.

CONCLUSION

“Star light, star bright
a premature baby is born tonight.
A precious gift, which fights for life,
with every ounce of their might,
Tonight we wish upon a star,
That our baby stays safe forever in our arms.”

So we should follow these guidelines and help the families with premature babies to care them as desired manner and sure to save the babies.

பகுதி ஈ

குறை பிரசவத்தில் பிறந்த குழந்தைகளின் பாதுகாப்பு முறைகள்

முன்னுரை

ஒரு குழந்தை கருவுற்று 37 வார இறுதிக்குள் பிறந்தால் அந்த குழந்தை குறைப்பிரசவ குழந்தையாகும். குறைப்பிரசவத்திற்கான காரணங்கள் சரியாக அறியபடவில்லை என்றாலும் இப்போது குறைப்பிரசவதிற்கான பல்வேறு காரணிகள் அறியப்பட்டு வருகின்றன.தற்போது கருவுற்று 23 மற்றும் 26 வாரங்கள், 500 கிராமுக்கு கீழ் உள்ள சில குழந்தைகள் நவீன தொழில்நுட்பத்தின் உதவியுடன உயிர்வாழ்கின்றனர்.ஆனாலும் இத்தகைய காலகட்டதில் பிறக்கும் குழந்தைகளின் இறப்பு விகிதம் அதிகமாக உள்ளது.

வகைப்பாடு

அளவை பொறுத்து வகைப்படுத்துதல்

குறைந்த பிறப்பு எடை (LBW) குழந்தை

ஒரு குழந்தையின் பிறப்பு எடை கருவுற்ற காலத்தை பொருட்படுத்தாமல், 2500 கிராமுக்கும் குறைவாக இருப்பது

மிக குறைந்த பிறப்பு எடை (ELBW) குழந்தை

ஒரு குழந்தையின் பிறப்பு எடை 1000g – கிராமுக்கும் குறைவாக இருப்பது

மிக மிக குறைந்த பிறப்பு எடை (VLBW) குழந்தை:

ஒரு குழந்தையின் பிறப்பு எடை1000கி -1500 கிராமுக்கும் குறைவாக இருப்பது

உடலியல் காரணங்கள்

குறைப்பிரசவத்தில் பிறந்த குழந்தைகளின் அனைத்து உறுப்புகளும் வளர்ச்சி அடையாமல் இருக்கும். குறைப்பிரசவத்தின் அளவு கருவுற்ற கால அளவை சார்ந்துள்ளது. உதாரணமாக கருவுற்று 32 வாரங்களுக்குள் பிறந்த குழந்தைகள், 36 வாரங்கள் கருவுற்று பிறந்த குழந்தைகளை விட வளர்ச்சி குறைவாக இருக்கும் என்று எதிர்பார்க்கப்படுகிறது. ஆரம்ப கட்டத்தில் குழந்தையின் கவனிப்பு முறைகள் சரியான வகையில் இல்லாமல் இருந்தால் வளர்ச்சி குறைவாக இருக்கும். மேலும் இது பல்வேறு பிரச்சனைகளை ஏற்படுத்தும்.

சுவாச முறை மற்றும் இதய உடற்கூறுகளின் மாற்றங்கள்:

ஆக்சிஜன் மனித உடல் செயல்பாடுகளுக்கு மிக முக்கியமான வாயு ஆகும். அதன் போதுமான அளவு கிடைக்காத போது, கரு உயிர்க்கு ஆபத்தாக இருக்கும்.

குறைப்பிரசவ குழந்தைகளுக்கு நுரையீரல் முதிர்வடையாமல், ஆக்சிஜன் மற்றும் கார்பன் டை ஆக்சைடு பரிமாற்றம் சரியான முறையில் நடைபெறுவது இல்லை. எனவே 37-38 வாரங்கள் கருவளர்ச்சி இல்லாத குழந்தைகளுக்கு ஆக்சிஜன் மற்றும் கார்பன் டை ஆக்சைடு பரிமாற்றம் முழுமையாக நடைபெறுவதில்லை.

சுவாச துவாரத்தின் வளர்ச்சியில் முக்கிய காரணிகள் பின்வருமாறு

குறைமாதக் குழந்தைகளால் தேவையான அளவு மூச்சு விடுவதற்கான பரப்பு உற்பத்தி செய்ய இயலவில்லை. பரப்பு குறைந்துவிடும் போது, எளிதில் காற்று நிரம்பி நுரையீரல் திறன் குறைந்து விடுகிறது. குறை பிரசவ குழந்தைகளின் சரிந்த அல்வியோல்லி ஆக்சிஜன் மற்றும் கார்பன் டை ஆக்சைடு பரிமாற்றங்கள் சரியாக நடைபெறாததால் குறைப்பிரசவ குழந்தைகளுக்கு ஆற்றல் அவர்களின் வளர்ச்சிக்கு சரியாக கிடைப்பதில்லை.

சுவாச ஆதரவு

குழந்தைகளுக்கு கீழே கொடுக்கபட்டுள்ளவற்றின் அடிப்படையில் சுவாச ஆதரவு அளிக்கப்படுகிறது.

- **மூடி மூலம் ஆக்சிஜன் அளிப்பது**
- **தொடர்ச்சியான நேர்மறை சுவாச அழுத்தம்**
- **மெக்கானிக்கல் வென்டிலேட்டர் வழியாக செயற்கை சுவாசம்**

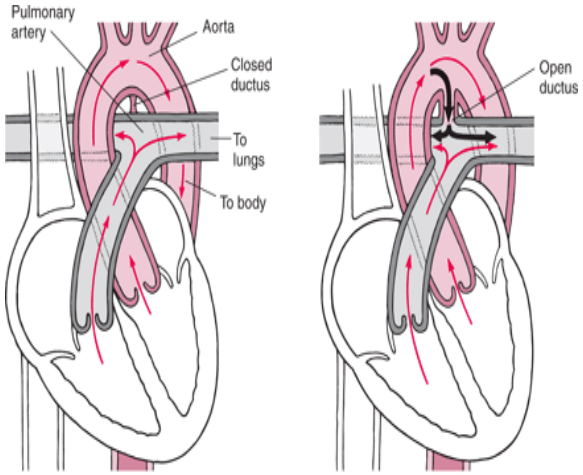
சுவாசத்திற்கு சரியான பராமரிப்பு முறைகள்

குழந்தை படுத்திருக்கும் நிலையை அடிக்கடி மாற்றி வைப்பதால் சுவாசப்பாதையில் சுரக்கும் மியூகஸ் மற்றும் நீர், தேங்காமல் வெளியே வருவதற்கு உதவியாக இருக்கும். முழுவதும் குப்புற படுப்பது மற்றும் சரிந்தநிலையில் படுப்பது முழுமையான கர்ப்பகாலத்தில் பிறந்த குழந்தைகளுக்கு பரிந்துரைக்கப்படுவதில்லை. ஏனெனில் முழுமையான கர்ப்பகாலத்தில் பிறந்த இத்தகைய குழந்தைகளுக்கு திடீரென இறப்பு ஏற்படும் நிலை உருவாகியுள்ளது.குப்புற படுக்கும் முறை மற்றும் ஒரு பக்கமாக படுக்கும் குறைபிரசவ குழந்தைகளுக்கு ஆக்சிஜன் அளவு அதிகரித்து சுவாசம் எளிதாக நடைபெறுகிறது.மேலும் அதிக ஆற்றல் இல்லாமல் சீரான நிலையில் சுவாசிப்பதற்கு வசதியாக இருக்கும்.எனவே தாய் குப்புற படுக்கும் நிலை மற்றும் ஒரு பக்கமாக படுக்கும் நிலை பற்றி தெரிந்துகொள்ள வேண்டும். தாய்பால் கொடுக்கும் போது குழந்தையின் சுவாச செயல்பாட்டை கருத்தில் கொள்ள வேண்டும்.

குழந்தைகளின் உடல் நீல நிறமாக மாறுதல்,வேகமாக மூச்சு எடுத்தல், மூச்சு திணறல் மற்றும் மார்பு உள் வாங்குதல்,ஆகியவற்றை கவனித்து இத்தகைய நிலை ஏற்ப்பட்டால் உடனடியாக மருத்துவமனைக்கு கொண்டு செல்ல வேண்டும்.

சிசுவின் இரத்தஓட்டம்

தாயின் வயிற்றில் குழந்தை இருக்கும் பொது ஆக்சிஜனேற்றம் பிளாசண்டா மூலமாக செயல்படுகிறது. ஆகையால் நுரையீரலின் செயல்பாடு தேவை இருக்காது



1.முழு வளர்ச்சியடைந்த குழந்தைகளில் டக்டஸ் ஆர்டிரியொசஸிஸ் பிறந்த உடன் மூடிவிடுகிறது. குறைமாதக் குழந்தைகளுக்கு டக்டஸ் ஆர்டிரியொசஸிஸ் மூடாமல் திறந்து

இருக்கும்.இதனால் நுரையீரலுக்கு அதிகமான இரத்தஓட்டம் இருக்கும்.முழுவளர்ச்சியடையாத நுரையீரல்களில் அதிகமான இரத்தஓட்டம் நீர் தேக்கதை ஏற்படுத்தும்.இத்தகைய சூழ்நிலையினால் குழந்தைக்கு மூச்சுத்திணறலை ஏற்படுத்தி ஆக்சிஜன் பரிமாற்றத்தை பாதிக்கும் நிலை ஏற்படுகிறது

வெப்பநிலை கவனம்

குறைப்பிரசவ குழந்தைக்கு சாதாரண வெப்பநிலை பராமரிப்பது ஒரு உண்மையான சவால் ஆகும். வெப்ப நிலையை பராமரிப்பதில் தாய்க்கும் மிக முக்கியமான பங்கு உள்ளது. உடல் வெப்பநிலையை பராமரிப்பதில் இரண்டு முக்கிய காரணிகள் உள்ளன. கல்லீரலில் இருக்கும் கிளைக்கோஜனின் அளவு மற்றும் பழுப்பு கொழுப்பின் அளவு குழந்தையின் உடல் வெப்ப்நிலையை பராமரிக்க உதவுகிறது மற்றும் குழந்தை குளிருக்கு நடுங்குதால் உடலில் வெப்பம் உண்டாகிறது.குறை பிரசவ குழந்தைகளின் தசைவளர்ச்சி குறைவாக இருப்பதால் குழந்தைகளினால் போதுமான அளவு வெப்பத்தை ஏற்படுத்த முடியவில்லை.

***<u>வெப்ப இழப்பிற்கான காரணங்கள்</u>*:**

- குறைப்பிரசவ குழந்தைகளுக்கு உடல் எடையை விட பரப்பளவு அதிகமாக இருக்கும். ஆகையால் அதிக உடல் பரப்பு இருக்கும் காரணத்தினால் வெப்ப இழப்பு அதிகமாக இருக்கும்.
- உடல் வெப்பநிலையை சீராக வைத்து பராமரிப்பதற்கு கொழுபபு முக்கிய பங்கு வகிக்கிறது. குறைவான அளவு கொழுப்பு இருப்பதால் வெப்பத்தை சீராக வைத்து கொள்வதில் சிரமமாக இருக்கும்.
- முழுவளர்ச்சி அடைந்த குழந்தையின் தசை வளர்ச்சி முழுமையாக இருப்பதால் குழந்தையால் உடம்பை குறுக்கி வைத்து கொள்ள முடிகிறது. இது உடம்பின் வெப்ப இழப்பை குறைக்கும். ஆனால் குறைமாத குழந்தையின் தசைவளர்ச்சி போதுமான அளவு இல்லததால் அவர்களால் உடலை குறுக்கி கொள்ள

முடிவதில்லை. இது அவர்களின் உடலின் பரப்பை அதிகரித்து வெப்ப இழப்பை ஏற்படுத்துகிறது.

<u>வெப்பநிலையை சீராக வைப்பதற்க்கு வழிமுறைகள்</u>

உடலின் வெப்பநிலையை சீராக வைத்துக்கொள்ள குழந்தைகளை அதற்கென தனியாக வைக்கப்பட்டுள்ள (crib/incubator) ல் வைத்து பராமரிக்க வேண்டும்.

- குழந்தைகளுக்கு சட்டை, டயபர் மற்றும் தொப்பி போன்ற ஆடைகள் அணிய வேண்டும். இவ்வாறு அணிவது உடல் முழுவதும் வெப்பநிலை அனுசரிக்க உதவுகிறது.
- திறந்தவெளியில் குழந்தையை வைப்பதை தவிர்க்க வேண்டும்.
- குழந்தையின் வெப்பநிலையை அடிக்கடி கவனித்து கொள்ளவேண்டும்
- குளிர் பரப்புகளில் குழந்தைகளை வைப்பது தவிர்க்கவும்.

செரிமான மண்டலம் மற்றும் அதை சார்ந்த பிரச்சனைகள்

செரிமான மண்டலம் கருவுற்ற 6 மாதத்திற்குள் வளர்ச்சியடைந்து விடுகிறது. இருப்பினும் செரிமான மண்டலம் முழுவதும் முதிர்ச்சி அடையாத காரணத்தினால் சில உணவு வகைகளை செரிமானித்து உறுஞ்சுவதில் சில பிரச்சனைகள் ஏற்படும்.

- குறைமாத குழந்தைகள் உணவில் உள்ள சாதாரண சர்க்கரை சத்துக்களை உறுஞ்சுவதிலிலோ உட்கொள்வதிலோ எந்த பிரச்சனையும் இருக்காது, எனவே புரதத்திலிருக்கும் அமினோ அமிலங்ககளில் மாற்றம் ஏற்படுவதால் உறுஞ்சுவதில் பிரச்சனை ஏற்படுகிறது.
- தாதுக்கள் மூன்றில் இரண்டு பங்கு மூன்று மாதங்களில் டெபாசிட் ஆகிவிடுவதால் கால்சியம் மற்றும் பாஸ்பரஸ் குறைபாடு குறைப்பிரசவ குழந்தைகளுக்கு இருக்கலாம். இதன் விளைவாக குறைப்பிரசவ குழந்தைகளுக்கு எலும்புருகி நோய் மற்றும் குறிப்பிடத்தக்க எலும்பு டீமினரலைசேஷன் ஏற்படும்.
- நெக்ரொடைடிஸ் எண்டிரோகோலைடிஸ் போன்ற குடல் தொற்று நோய்கள் ஏற்ப்பட வாய்ப்பு உள்ளது.

மேற்கூறிய பிரச்சனைகளை தாய்ப்பால் கொடுப்பதால் தவிர்க்கலாம்.ஆகையால் தாய்மார்கள் தாய் பாலூட்ட வேண்டும். தாய்ப்பாலின் முக்கியத்துவம் பற்றி தெரிந்து கொள்ள வேண்டும்.

சிறுநீரக உடற்கூறு மற்றும் காரணங்கள்

குறைப்பிரசவ குழந்தையின் சிறுநீரகங்கள் முழு கால குழந்தையை ஒப்பிடுகையில் முதிராமல் உள்ளன.

குறைப்பிரசவ குழந்தைகள் குறிப்பிட்ட பண்புகள் பின்வருமாறு

குறைப்பிரசவ குழந்தையின் சிறுநீரகங்களுக்கு சிறுநீரை உற்பத்தி செய்வது அதிகப்படியான நீரை வெளியேற்றுவதற்கு போதுமான வளர்ச்சி இருக்காது. ஆகையால் குறைமாதக் குழந்தையினால் அதிகபடியான நீரை வெளியேற்றுவது மற்றும் நீர் குறைவாக இருக்கும் போது அதை தக்க வைத்து கொள்ளும் திறனும் குறைவாக இருக்கும்.

இரத்ததில் சராசரியாக சர்க்கரையின் அளவு இருக்கும் போது சிறுநீரில் சர்க்கரையை இழக்கும் தன்மை உடையதாக இருக்கும்.ஆகையால் குறைமாதக்குழந்தைக்கு சிறுநீரில் குளுக்கோஸ் சத்து வெளியேற வாய்ப்பு உள்ளது.

முதிர்ச்சி இல்லாத சிறுநீரகங்கள் மருந்துகளை வெளியேற்றுவதில் சிரமம் இருக்கும. ஆகையால் மருந்து கொடுக்கும் போது அதற்கு ஏற்றவாறு மருந்துகளை பார்த்து கொடுக்க வேண்டும்.

சிறுநீரக ஆதரவு

குழந்தை எத்தனை முறை சிறுநீர் கழிக்கிறது என்பதை தாய் தெரிந்து கொள்ள வேண்டும்.

ஊட்டச்சத்து மற்றும் பாய்மத்தேவை மேலாண்மை

குறைப்பிரசவ குழந்தைகளுக்கு போதுமான ஊட்டச்சத்து மற்றும் திரவங்கள் வழங்குவது ஒரு பெரிய சவால் ஆகும். குழந்தை பிறந்தவுடன் தாய்பால் ஊட்டுவதற்கு தாய்மார்களை வலியுறுத்த வேண்டும் இவ்வாறு செய்வதால் குறைவான சர்க்கரை அளவு, மஞ்சள்காமாலை, இரத்ததில் அதிக அளவு பொட்டாஷியம் போன்ற பிரச்சனைகளை தவிர்க்கலாம்.

ஊட்டச்சத்து தேவைகள்

ஒரு ஆரோக்கியமான குறைப்பிரசவ குழந்தை வாய்வழி 120 - 150 கிலோகலோரி / கிலோ / நாள் உட்கொள்ளல் வேண்டும். குறைப்பிரசவ குழந்தைகளுக்கு அதிக புரதசத்து தேவைபடுகிறது (3 – 4 கிராம் / கிலோ / நாள்), முழு கால குழந்தைக்கோ (2.0 முதல் 2.5 கிராம் / கிலோ / நாள்) இந்த தேவைகளை சந்திக்க புரதசத்து நிறைந்த உணவுகளை அதிக அளவு அளிக்க வேண்டும்.சில குழந்தைகளுக்கு வாய்வழியாக ஊட்டச்சத்து கொடுக்க முடியாத போது இரத்த நாளங்கள் வழியாக ஊட்டச்சத்து வழங்க வேண்டும் மல்டிவைட்டமின்கள், வைட்டமின் ஈ, கால்சியம் மற்றும் வைட்டமின் டி ஆகியவை வழங்கப்படவேண்டும். இதனால் குழந்தையை இரத்தசோகை நோயிலிருந்து பாதுகாக்கலாம்.

குறைப்பிரசவ குழந்தைகக்கான உணவு வகைகள்

குழந்தையின் உடல் நிலைக்கு ஏற்ற உணவுதாய்ப்பால்.தாய்ப்பால் சரியாக கிடைக்காத குழந்தைகளுக்கு செயற்கை உணவு வகைகளை சரியான விகிதத்தில் வழங்கவேண்டும். தாய்ப்பால் குழந்தைக்கும் தாய்க்கும் நிறைய நன்மைகளைத் தருகிறது.

உணவு வழங்கும் முறைகள்

குறைப்பிரசவ குழந்தையின் வளர்ச்சியை பொறுத்து பல்வேறு முறைகள் மூலம் உணவு அளிக்கலாம். மிகவும் பொதுவான வாய்வழி உணவு முறைகள் நிப்பிள், மார்பக வெளிப்படுத்திய பால் மற்றும் குழாய் வழி பால் உணவுகளை கொடுக்கலாம்

மார்பக தாய்ப்பால்:

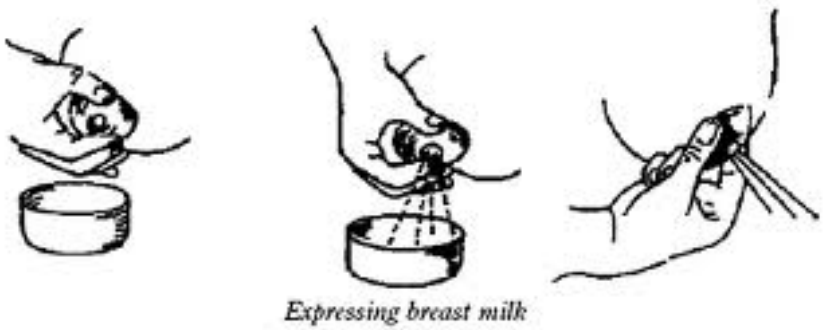
குறை மாத குழந்ததைக்கு ஏற்ற உணவு தாய்ப்பால் ஆகும். ஒரு நாளைக்கு 180 மில்லிலிட்டர் தாய்ப்பால் கொடுத்தால் குழந்தைக்கு தேவையான தண்ணீர் கிடைக்கும். தாய் பாலில் குழந்தையின் வளர்ச்சிக்கு தேவையான புரதச்சத்து உள்ளது.

வெளிப்படுத்தின தாய்ப்பால்

தாய் ஒரு சுத்தமான பரந்த வாயுள்ள கொள்கலன் மூலம் பாலை வெளிப்படுத்த வேண்டும். தாய்ப்பால் சுரக்காத தாய்மார்கள் பிற தொழிலாளர்கள் மூலமாக தாய்பால் வழங்க வேண்டும்.வெளிப்படுத்தப்பட்ட மார்பகபால் உறை வெப்பநிலையில் 3 மாதங்கள்,குளிர்சாதனப்பெட்டியில் 24 மணிநேரம் மற்றும் அறை வெப்பநிலையில் 6-8 மணிநேரம் சேமித்து வைக்கலாம்.

பால் வெளிப்பாடு முறை

தாய் பால் வெளியேற்றுவதற்க்கு முன் சோப் கொண்டு ஒவ்வொரு முறையும் தாயின் கைகளை சுத்தம் செய்ய வேண்டும். தாயை ஆசுவாசப்படுத்தி, மெதுவாக மார்பகத்தை மசாஜ் செய்து, காம்பின் கீழ் கொள்கலனை வைக்க வேண்டும். காம்பின் முனையிலிருந்து 4 செ.மீ தூரத்தில் தாயின் கட்டை விரலை ஒருபுறமும், ஆள்காட்டி விரலை மற்றொரு புறமும் வைத்து மெதுவாக அழுத்தி பாலை வெளிப்படுத்தவேண்டும். இதே போல் செய்யும் போது பால் வேகமாக வந்து குழந்தைக்கு தேவையான அளவு கிடைகிறது.இந்த முறையை 20-30 நிமிடங்கள் இர்ண்டு மார்பகங்களிலும் 5 முதல்6முறைகள் மாற்றிமாற்றி வெளிப்படுத்தலாம்.



Expressing breast milk

"Katori" ஸ்பூன் உணவுகள் :

ஒரு ஸ்பூன் அல்லது "paladai" மற்றும் katori அல்லது கோப்பை அல்லது மற்ற கொள்கலன் போன்ற சாதனம் மூலம் உணவுகொடுப்பது குறைமாதக்குழந்தைகளுக்கு பாதுகாப்பாக இருக்கும் என கண்டுபிடிக்கப்பட்டுள்ளது. ஒரு நடுத்தர அளவிலான "katori" மற்றும் ஒரு சிறிய கரண்டியை பயன்படுத்த வேண்டும். மேலும் இரண்டு பாத்திரங்களை கழுவி சுத்தம் செய்ய வேண்டும். katori–யில் வெளிப்படுத்தப்படும் மார்பக பால் தேவையான அளவு எடுத்து கொள்ள வேண்டும். கொள்கலன் விளிம்பை துடைத்து குழந்தையின் கழுத்தில் ஒரு துடைக்கும் துணியை வைக்கத்து கரண்டியில் பாலை நிரப்பி அதை குழந்தையின் வாயில் வைத்து குழந்தை உறுஞ்சும் வரை மெதுவாக சாய்த்து வைத்திருக்க வேண்டும்.

குழாய் வழி ஊட்டம் அல்லது குழாய் வழி அளித்தல்

குழந்தை சோர்ந்துபோய் தங்களால் பால் உறிஞ்சிகுடிக்க முடியாத மற்றும் குறைந்த எடை கொண்ட குழந்தைகளுக்கு இந்த முறையை பயன்படுத்தலாம்

<u>உணவு வழங்கும் முறை</u>

குழந்தைக்கு தேவையான உணவுகள் அதனுடைய சராசரி தேவையை மட்டும் சார்ந்தது அல்லாமல் குழந்தையின் உடலமைப்பு அதை ஏற்றுக்கொள்ளும் தகுதியையும் பொறுத்தது.குழந்தைக்கு தேவையான உணவை வாய்வழியாக மற்றும் இரத்தநாளங்கள் வழியாக வழங்கலாம்.வாய்வழியாக உணவு குழந்தை ஒரு நாளைக்கு 60-80 மில்லி லிட்டர் /கிகி உணவு எடுத்துகொள்கிறது. இந்த அளவு தினமும் 15 மில்லி லிட்டர் அதிகரித்து 7வது மற்றும் 10வது நாளில் 180-200 மில்லி லிட்டர் வரை அதிகரிக்க வேண்டும். பிறந்த 2 மணி நேரத்திற்க்குள் குழந்தைக்கு உணவு கொடுக்க வேண்டும்.

<u>ஊட்டச்சத்து கண்காணிக்கும் முறை:</u>

குழந்தையின் உடலுக்கு தேவையான ஊட்டச்சத்து கிடைக்கிறதா என்பதை அறிய குழந்தையின் எடை அதிகரிப்பதை கண்காணிக்க வேண்டும்.குறை மாத குழந்தை தினம்தோறும் 1-2% உடல் எடை குறைந்து முதல் வாரத்தில் எடை படிப்படியாக கூட தொடங்குகிறது.இரண்டாவது வாரத்திற்கு மேல் தினம் தோறும் 15-20 கிராம் கூடுகிறது .எனவே தினம்தோறும் குறைமாதக்குழந்தையின் எடையை கண்காணிக்க வேண்டும்.சரியான அளவு ஊட்டச்சத்து கிடைக்கும் போது குழந்தையின் எடை அதிகரிப்பதை பொறுத்து நாம் ஊட்டச்சத்தின் தேவையை அதிகப்படுத்தலாம்.

<u>உணவு வழங்குவதில் ஏற்படும் சிக்கல்கள்</u>

தாய் குழந்தைக்கு உணவூட்டும் போது உணவு வகைகளை கவனமாக கொடுக்க வேண்டும். ஏனெனில் குறைப்பிரசவ குழந்தைக்கு கீழ்கண்ட பிர்ச்சனைகள் ஏற்படலாம்.

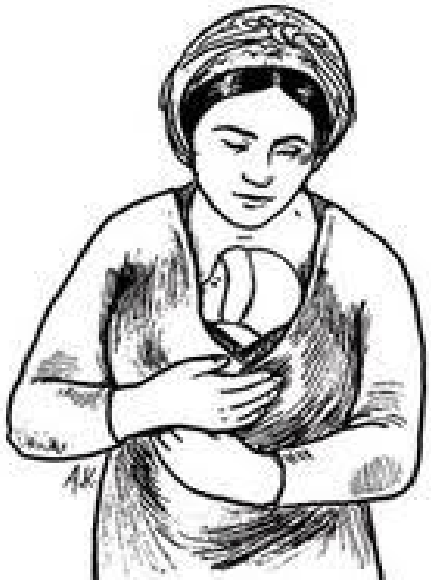
- உறுஞ்சுவதில் சிக்கல்கள்
- குறைந்த அளவு உணவு எடுத்து கொள்ளுவது
- குறைந்த இரத்தஓட்டம் காரணமாக குடல் தொற்றுநோய் ஏற்படும் அபாயம்.

செவிலியர் குறைப்பிரசவ குழந்தைக்கு உணவு கொடுக்க பெற்றோரை ஈடுபடுத்துவர். இந்த இணைப்பு பெற்றோர்கள் மற்றும் குழந்தைக்கு இடையே வளர்ச்சிக்கு அவசியம். தங்கள் குழந்தையை கவனிப்பது பற்றி பெற்றோரின் அறிவு அதிகரித்து அவர்களின் நிலைமையை சமாளிக்க உதவும்

கங்காரு தாய் பாதுகாப்பு முறை

குறைபிரசவ அல்லது குறைந்த பிறப்பு எடை கொண்ட குழ்ந்தைகளுக்கு தாயின் தோலுடன் தோல் தொடர்பு முறை பாதுகாப்பு தருவதாக உள்ளது. கங்காரு பாதுகாப்பு முறையானது ஆரம்பத்தில் குறைந்த பிறப்பு எடை கொண்ட குழந்தைகளுக்கு ஒரு

மாற்றுமுறையாக கருதப்பட்டது.தற்போது கங்காரு பாதுகாப்பு முறையானது தொழில்நுட்பம் சார்ந்த பாதுகாப்பு இணைமூலமாக மாறி தரத்தை மாற்றிவிட்டது



தகுதிகள்

கங்காரு நிலை என்பது தாய் மற்றும் குழந்தைக்கு இடையிலான தோல் தொடர்பு பாதுகாப்பு முறை ஆகும்.செங்குத்து நிலையில் தாயின் மார்பகங்களுகு இடையே மற்றும் அவரது துணியின் கீழ் குழந்தை இருப்பதாக கொள்ள வேண்டும்.இதன் நீடிக்கும் காலம் இரண்டுவகையாக உள்ளது.தொடர்ச்சியான நிலை அல்லது விட்டு விட்டு பராமரிக்கும் நிலை. உடலின் வெப்பநிலையை தன்னால் பாதுகாக்க முடியும் என்ற நிலைமை வந்தபிறகு தொடர்ச்சியான கங்காரு பாதுகாப்பு நிலையில் வைத்து பராமரிக்கலாம். தொடர்ச்சியான நிலை முடியாத போது விட்டு விட்டு பராமரிக்கும் முறையையும் பயன்படுத்தலாம். கங்காரு நிலையில் குழந்தையை பராமரிப்பது தாய்க்கும் குழந்தைக்கும் இடையே நல்ல பிணைப்பு ஏற்படுவதோடு அல்லாமல் ஒரு நல்ல பிணைப்பு ஏற்படுத்த உதவியாக இருக்கும்

கங்காரு தாய் பாதுகாப்பு முறையின் நன்மைகள்

உடலியல் நன்மைகள்

இதயம் மற்றும் சுவாச விகிதம், சுவாசம், ஆக்சிஜனேற்றம், ஆக்ஸிஜன் நுகர்வு, இரத்ததில் குளுக்கோஸ் அளவு சரியாக இருத்தல், மற்றும் குழந்தைக்கு நல்ல உறக்கம் கிடைப்பது மட்டுமல்லாமல் தாய்க்கும் குழந்தைக்கும் நல்ல பிணைப்பு ஏற்படுகிறது.

மருத்துவ பயன்கள்

- கங்காரு தாய் பாதுகாப்பு முறையானது தாய்மார்களின், பால் உற்பத்தியை அதிகரித்து தாய்ப்பால் கொடுப்பது அதிகரிக்கிறது
- கங்காரு தாய் பாதுகாப்பு முறையானது சுவாசக்குழாய் மற்றும் மருத்துவமனையில் ஏற்படும் நோய்த்தொற்று நிகழ்வை குறைக்கிறது.
- உடல் எடையை அதிகரிக்கிறது.
- இந்த குழந்தைகளுக்கு வெப்ப பாதுகாப்பு அதிகரிக்கிறது மற்றும் தாழ்வெப்பநிலை தடுக்கிறது
- இது குழந்தை மற்றும் தாய் மார்கள் இடையே உள்ள உணர்ச்சி பிணைப்பு அதிகரிக்கிறது.
- கங்காரு தாய் பாதுகாப்பு முறையானது மருத்துவமனையில் தங்கும் காலஅளவை குறைக்கிறது.

கங்காரு தாய் பாதுகாப்பு முறைக்கான தகுதிகள்

அனைத்து நிலையான குறைப்பிரசவ குழந்தைகளுக்கும் கங்காரு தாய் பாதுகாப்பு முறை பயனுள்ளது என குறிப்பிடப்படுகிறது.மிகவும் நோய்வாய்ப்பட்ட குழந்தைகளுக்கு ஆரம்பத்தில் கதிரியக்க வெப்பத்தின் கீழ் வைக்கப்படுவதால் சிறப்பு கவனம் தேவைப்படுகிறது.கங்காரு தாயார் பாதுகாப்பு முறை தொடர்ச்சியாக மருத்துவ சிகிட்சையில் இருக்கும் குழந்தைகளுக்கு அளிக்கலாம்.வாய்வழியாக இரப்பையை சென்றடையும் குழாய் மற்றும் ஆக்ஸிஜன் சிகிட்சை பெற்றுவரும் குழந்தைகளுக்கும் இந்த முறையை பயன்படுத்தலாம்.

பிறப்பு எடை > 1800கி

இந்த குழந்தைகள் பிறக்கும் போது பொதுவான நிலையில் உள்ளனர். எனவே, அவர்களுக்கு கங்காரு தாயார் பாதுகாப்பு முறை பிறந்த உடனே தொடங்கப்பட்டவேண்டும்

பிறப்பு எடை 1200 – 1799கி

இந்த வகையான எடை கொண்ட குழந்தைகள் பிறந்த காலத்தில குறிப்பிடத்தக்க பிரச்சினைகள் காணப்படுகின்றன எனவே கங்காரு தாயார் பாதுகாப்பு முறைதொடங்கப்பட ஒரு சில நாட்கள் ஆகலாம்.

பிறப்பு எடை < 1200கி

இந்த குழந்தைகள் பிறந்த உடனே தீவிர முதிர்ச்சியடையாத நிலை தொடர்பான நோய்கள் ஏற்படுகிறது. எனவே கங்காரு தாயார் பாதுகாப்பு முறை தொடங்கப்படுவதற்கு பல அல்லது வாரங்கள் அல்லது நாட்கள் ஆகலாம்.

தாய்

அனைத்து தாய்மார்களுக்கும் அவர்களின் வயது, குழந்தை பேறு, கல்வி, கலாச்சாரம் மற்றும் மதத்தின் அடிப்படையில் கங்காரு தாய் பாதுகாப்பு முறையானது வழங்க வேண்டும்.மருத்துவரின் பரிந்துரையின் படி போதுமான உணவு மற்றும் நல்ல சுகாதாரத்தை ஏற்படுத்த பரிந்துரைக்கப்பட வேண்டும்.மேலும் வழக்கமான வீட்டுவேலைகளை செய்வதை தவிர்க்க குடும்பத்தினரின் ஒத்துழைப்பு தேவைபடுகிறது.

கங்காரு தாய் பாதுகாப்பு முறையானது தொடங்கப்படுவதற்கு ஆலோசனை

குழந்தை கங்காரு தாய் பாதுகாப்பு முறைக்கு தயாராக இருக்கும் போது, தாய் மற்றும் அவரது குழந்தை வசதியாக இருக்க ஏற்பாடு செய்ய வேண்டும். மென்மையான மற்றும் பொறுமையாக கங்காரு தாய் பாதுகாப்பு முறையை நிரூபணம் செய்து காண்பிக்க வேண்டும். அவரது கேள்விகளுக்கு பதில் அளித்து அவர்களளின் சந்தேகங்கள் மற்றும் பயத்திலிருந்து தெளிவு படுத்த வேண்டும்.குடும்பதிலுள்ள அனைத்து உறுபினர்களுக்கும் கங்காரு பாதுகாப்பு முறையை பற்றி விளக்கி கூறி அவர்களது ஒத்துழைப்பு கிடைக்க வழி செய்ய வேண்டும்.ஏற்கனவே கங்காரூ பாதுகாப்பு முறையை பன்பற்றும் தாய்மார்களுடன் கலந்து பேச ஏற்பாடுகள் செய்து கொடுக்க வேண்டும்.

தாயின் ஆடை

உள்ளூர் கலாச்சாரதிற்கு ஏற்ப முன் பக்கம் திறந்து மூடக்கூடிய ஆடைகளை பயன்படுத்த வேண்டும்.

குழந்தை ஆடை

குழந்தைக்கு தொப்பி, காலுறை, துணி, மற்றும் முன் திறந்த கையில்லாத சட்டை கொண்டு உடையணிய வேண்டும்.

நடைமுறை

கங்காரு நிலைகள்

குழந்தை ஒரு செங்குத்தான நிலையில் தாயின் மார்பகங்களில் இடையே வைக்கப்பட வேண்டும். தலையை ஒரு புறமாக திரும்பி சற்று நீட்டிக்கப்பட்ட நிலையில் வைக்க வேண்டும். இந்த சற்றே நீட்டிக்கப்பட்ட தலை சுவாசம் திறந்த நிலையில் வைத்திருக்க உதவியாக இருக்கிறது மற்றும் தாயார் மற்றும் அவரது குழந்தைக்கு

இடையே கண் தொடர்பு கொள்ள உதவியாக இருக்கிறது குழந்தையின் வயிறு தாயின் இரைப்பைக்கு முந்தைய வயிற்று பகுதி மட்டத்தில் இருக்க வேண்டும். இவ்வாறு வைப்பதால் தாயின் சுவாசத்தின் போதுகுழந்தையை சுவாசிக்கத் தூண்டி அதன் சுவாசம் சரியாக இருக்க உதவுகிறது.

கண்காணிப்பு

கங்காரு தாய் பாதுகாப்பு பெறும் குழந்தைகள், குறிப்பாக ஆரம்ப கட்டங்களில், கவனமாக கண்காணிக்கப்பட வேண்டும் தாய் குழந்தையின் கழுத்துபகுதி சரியாக மடங்கிய நிலையில் உள்ளதா அல்லது நீடிக்கப்பட்ட நிலையில் உள்ளதா மற்றும் சுவாச தெளிவாக, வழக்கமாக உள்ளதா, இளஞ்சிவப்பு மற்றும் குழந்தை வெப்பநிலை பராமரிக்கபடுகிறதா என்பதை தாய் உறுதி செய்துகொள்ளவேண்டும்

உணவு

தாய்க்கு குழந்தை கங்காரு பாதுகாப்பு நிலையில் இருக்கும் போது எவ்வாறு தாய்ப்பால் கொடுக்க வேண்டும் என்று கற்றுக் கொடுக்க வேண்டும்

தனியுரிமை

கங்காரு பாதுகாப்பு நிலையில் தாய்மார்களின் மார்பு வெளியே தெரிவதற்கான வாய்ப்புகள் அதிகமாக உள்ளது.எனவே அவர்களுக்கு தனியறை கொடுத்து கலாச்சார மற்றும் தனியுரிமை தரத்தை உறுதி கொள்ள வேண்டும்.

நீடிக்கும் காலம்

தோலுடன் தோல்தொடர்பு முறை குழந்தை பிறந்து அதற்கு ஏதுவாக இருக்கும் போது தொடங்கப்பட வேண்டும். கங்காரு தாய் பாதுகாப்பு முறையில் எப்போதும் குழந்தை தாயுடன் இருக்கலாம். கங்காரு தாய் பாதுகாப்ப நிலையில் தாயும் குழந்தையும் ஒன்றாக படுத்து உறங்கலாம்.

கங்காரு தாய் பாதுகாப்பு நிலை நிறுத்தும் போது

கங்காரு தாய் பாதுகாப்பு நிலை குழந்தை தொடர்ந்து 2500 கிராம் எடை மற்றும் கருவுற்று 37 வாரங்கள் அடையும் போது தேவையற்றதாக உள்ளது. கங்காரு நிலையில் வைக்கப்படும் போது, நெளிவது, மூட்டுகளை வெளியே இழுப்பது, அல்லது அழுவது இனி கங்காரு தாய் பாதுகாப்பு நிலை தேவை இல்லை என்பதைக் காட்டுகிறது.

தொற்று தடுப்பு

தொற்றுநோய் கிருமியிலிருந்து குறைமாத குழந்தையை பாதுகாப்பதில் தாய்க்கு முக்கியமான பங்கு உள்ளது. நோய் எதிர்ப்பு சக்தி குறைவாக,தோல் மென்மையாக இருப்பதால் எளிதாக தொற்று நோய்கள் பரவ வாய்ப்புள்ளது. செயற்கை சுவாசம்

அளிப்பது, ஊசி மூலமாக மருந்துகளை செலுத்துவது போன்ற முறைகள் அதிகமாக தொற்றுநோயை ஏற்படுத்துகின்றது.

கை கழுவுதல், தனிமைபடுத்துத்தல், மருத்துவ உபகரணங்களை சரியான முறையில் தூய்மையாக்கி உபயோகிப்பது,போன்ற முறைகள் குறைமாத குழந்தையைத் தொற்றுநோயிலிருந்து பாதுகாக்கின்றது.

பொதுவான சிக்கல்கள்

குழந்தைகளுக்கு வளர்ச்சி இல்லாமையால் ஏற்படும் விளைவுகள் பற்றிப்படித்தோம்.மேலும் பல விளைவுகள் உள்ளன

- மூச்சுத்திணறல்
- மூளையில் இரத்தகசிவு
- கால்சியம் பற்றாக்குறை
- இரத்தத்தில் சர்க்கரையின் அளவு குறைவு
- இரத்தசோகை
- மஞ்சள் காமாலை
- தொற்றுநோய்கள்

முடிவுரை

“விண்மீன்களை போல பிரகாசத்துடன்
ஒரு குறைமாதக் குழந்தை பிறந்துள்ளது
தாய்மார்களுக்கு இது ஒரு விலைமதிப்பற்ற பரிசு
அது தன்னை காப்பாற்ற தன் உடலில் உள்ள சக்தி
அனைத்தையும் திரட்டி உயிர் வாழ போராடுகிறது
இந்த குழந்தை நம் கைகளில் பாதுகாப்பாய் திகழ வேண்டும்
என்று இறைவனை வேண்டுவோம்.”

APPENDIX- C

KMCH ETHICS COMMITTEE

KOVAI MEDICAL CENTER AND HOSPITAL LIMITED

Post Box No. 3209, Avanashi Road, Coimbatore - 641 014. INDIA

✆ : (0422) 4323800 Fax : (0422) 4270805

Ref: EC/AP/277/10/2013
31.10.2013

APPROVED

EC Registration Number
ECR/112/Inst/TN/2013

To:

The Principal,
KMCH College of Nursing,
Coimbatore - 641 014
Tamilnadu, India.

Dear Madam,

The proposal entitled "**A study to assess the effectiveness of educational intervention on caring skills and coping abilities of mothers with premature babies in KMCH, Coimbatore**" submitted by **Ms.M.Shibi Angela** under guidance of **Prof.S.Renuka** was reviewed by the Ethics Committee in its meeting held on 31.10.2013 and permission is granted to carryout the study at Kovai Medical Center and Hospital Ltd, Coimbatore, India.

Thanking you,

Yours faithfully,

31/10/13

Dr. P. R. Muthuswamy
Chairman, KMCH Ethics Committee

Dr. P. R. MUTHUSWAMY,
MA.,MBA. FDFM(IIM-A)Ph.D.
Chairman
Ethics Committee
Kovai Medical Center and Hospital
Avanashi Road,
COIMBATORE-641 014.

Enclosure: Copy to Dr.A.R.Srinivas

APPENDIX- D

K M C H COLLEGE OF NURSING

(Recognised by the Government of Tamil Nadu & Indian Nursing Council New Delhi)
Affiliated to the Tamil Nadu Dr. MGR. Medical University, Chennai
K.M.C.H. Campus, Avanashi Road, Coimbatore - 641 014. INDIA
Ph : (0422) 4323740, 4323721 Telefax : (0422) 2627525 E-mail : info@kmch.ac.in Website : www.kmch.ac.in

Ref : KMCT/2962/09/13

September 6th,2013

To

Dr.A.R.Srinivas. MD , paed.,
FRACP in Neonatology - Australia
Consultant Neonatologist (Specialist in Newborn care),
Kovai Medical Center and Hospital,
Coimbatore – 14

Dear Sir

Greetings to you.

I submit that one of our M.Sc(N) final year students by name Ms. M.Shibi Angela Specializing in Obstetrics & Gynecological Nursing in our college desires to conduct a study Titled **"A study to assess the effectiveness of educational intervention on knowledge regarding caring skills and coping abilities of mothers with premature babies at Kovai Medical center and Hospitals, Coimbatore."** As a part of her M.Sc (N) curriculum.

As she is in need of Medical Expert to complete the study, I request you to guide the student.

Thanking you,

Yours Truly,

Prof. DR. S. Madhavi, M.Sc(N)., Ph.D.,
Principal.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

APPENDIX – E

REQUISITION FOR CONTENT VALIDITY OF THE TOOL

From,

Ms. Shibi Angela.M,

II Year M.Sc(N),

KMCH College of Nursing,

Coimbatore – 14.

To,

The Principal,

Dr. N.G.P. Arts and Science college,

Coimbatore.

Through,

The Principal,

KMCH College of Nursing,

Coimbatore – 14.

Respected Madam,

Sub: Seeking expert opinion and content validity regarding

I ,Ms. Shibi Angela.M, II Year M.Sc(N), student of KMCH College of Nursing, wish to undertake a study titled, **"A Study To Assess The Effectiveness Of Educational Intervention On Caring Skills And Coping Abilities Of mothers With Premature Babies In KMCH At Coimbatore"**. As it is a part of partial fulfillment of my post graduate programme, it will be of immense help if you could peruse the Tamil translation of the research tool. Here with I am enclosing the copy of the same. Kindly do the needful.

Thanking You

Place: Coimbatore

Date: 2/09/2013

Yours Faithfully,

M. Shibi Angela

Shibi Angela.M

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road.
Coimbatore - 641 014.

CERTIFICATION OF CONTENT VALIDITY

This is to certify that I have perused the research proposal submitted by Ms. Shibi Angela. M that **"A STUDY TO ASSESS THE EFFECTIVENESS OF EDUCATIONAL INTERVENTION ON KNOWLEDGE REGARDING CARING SKILLS AND COPING ABILITIES OF MOTHERS WITH PREMATURE BABIES IN KMCH, COIMBATORE".**

I found that Methodology and Instruments are appropriate.

Place Coimbatore

Date 28/10/2013

Signature& Seal

Dr. A.R. SRINIVAS MD., Paed
FRACP IN Neonatology Australia
Consultant Neonatologist
(Specialist in New Born Care)

CERTIFICATE OF CONTENT VALIDITY

This is to certify that I have perused the research tool submitted by Miss.Shibi Angela.M "A STUDY TO ASSESS THE EFFECTIVENESS OF EDUCATIONAL INTERVENTION ON CARING SKILLS AND COPING ABILITIES OF MOTHERS WITH PREMATURE BABIES IN KMCH, COIMBATORE." I found that the Tamil translation of the tool and the lesson plan is appropriate.

Place: கோயம்புத்தூர்

Date: 18.10.13

Signature & Seal

தமிழ்த்துறைத் தலைவர்
டாக்டர் என். ஜி. பி. கலை அறிவியல் கல்லூரி
கோயம்புத்தூர்-641 035

APPENDIX - F

LIST OF EXPERTS

1. **DR.A.R SRINIVAS, M.D., (PED)**
   FRACP in Neonatology, consultant Neonatologist,
   Kovai Medical Center and Hospital,
   Coimbatore 641014.

2. **PROF. MRS.RENUKA.S., MSC (N)**
   HOD of Maternal Health Nursing,
   KMCH college of Nursing,
   Coimbatore-641014

3. **MRS. R. INDUMATHI M.SC (N)**
   Associate Professor
   OBG Department,
   KMCH college of Nursing,
   Coimbatore-641014

4. **MRS.P PADMA M.SC (N)**
   Associate Professor
   OBG Department,
   KMCH college of Nursing,
   Coimbatore-641014